HP KVM Server Console Switch Maintenance and Service Guide

May 2006 (Second Edition)
Part Number 339820-002

HP KVM Server Console Switch Maintenance and Service Guide

May 2006 (Second Edition)

Part Number 339820-002

Audience assumptions

This guide is for an experienced service technician. HP assumes you are qualified in the servicing of computer equipment and trained in recognizing hazards in products with hazardous energy levels and are familiar with weight and stability precautions for rack installations.

Important Safety Information

Before installing this product, read the *Important Safety Information* document provided.

⚠ **WARNING: To reduce the risk of personal injury or damage to the equipment, be sure that:**

- **The leveling feet are extended to the floor.**
- **The full weight of the rack rests on the leveling feet.**
- **The stabilizing feet are attached to the rack if it is a single-rack installation.**
- **The racks are coupled together in multiple-rack installations.**
- **Only one component is extended at a time. A rack may become unstable if more than one component is extended for any reason.**

Contents

Customer self repair

HP products are designed with many Customer Self Repair (CSR) parts to minimize repair time and allow for greater flexibility in performing defective parts replacement. If during the diagnosis period HP (or HP service providers or service partners) identifies that the repair can be accomplished by the use of a CSR part, HP will ship that part directly to you for replacement. There are two categories of CSR parts:

- **Mandatory**—Parts for which customer self repair is mandatory. If you request HP to replace these parts, you will be charged for the travel and labor costs of this service.
- **Optional**—Parts for which customer self repair is optional. These parts are also designed for customer self repair. If, however, you require that HP replace them for you, there may or may not be additional charges, depending on the type of warranty service designated for your product.

NOTE: Some HP parts are not designed for customer self repair. In order to satisfy the customer warranty, HP requires that an authorized service provider replace the part. These parts are identified as "No" in the Illustrated Parts Catalog.

Based on availability and where geography permits, CSR parts will be shipped for next business day delivery. Same day or four-hour delivery may be offered at an additional charge where geography permits. If assistance is required, you can call the HP Technical Support Center and a technician will help you over the telephone. HP specifies in the materials shipped with a replacement CSR part whether a defective part must be returned to HP. In cases where it is required to return the defective part to HP, you must ship the defective part back to HP within a defined period of time, normally five (5) business days. The defective part must be returned with the associated documentation in the provided shipping material. Failure to return the defective part may result in HP billing you for the replacement. With a customer self repair, HP will pay all shipping and part return costs and determine the courier/carrier to be used.

For more information about HP's Customer Self Repair program, contact your local service provider. For the North American program, refer to the HP website (http://www.hp.com/go/selfrepair).

Parts only warranty service

Your HP Limited Warranty may include a parts only warranty service. Under the terms of parts only warranty service, HP will provide replacement parts free of charge.

For parts only warranty service, CSR part replacement is mandatory. If you request HP to replace these parts, you will be charged for the travel and labor costs of this service.

Réparation par le client (CSR)

Les produits HP comportent de nombreuses pièces CSR (Customer Self Repair = réparation par le client) afin de minimiser les délais de réparation et faciliter le remplacement des pièces défectueuses. Si pendant la période de diagnostic, HP (ou ses partenaires ou mainteneurs agréés) détermine que la réparation peut être effectuée à l'aide d'une pièce CSR, HP vous l'envoie directement. Il existe deux catégories de pièces CSR:

- **Obligatoire** - Pièces pour lesquelles la réparation par le client est obligatoire. Si vous demandez à HP de remplacer ces pièces, les coûts de déplacement et main d'œuvre du service vous seront facturés.
- **Facultatif** - Pièces pour lesquelles la réparation par le client est facultative. Ces pièces sont également conçues pour permettre au client d'effectuer lui-même la réparation. Toutefois, si vous demandez à HP de remplacer ces pièces, l'intervention peut ou non vous être facturée, selon le type de garantie applicable à votre produit.

REMARQUE: Certaines pièces HP ne sont pas conçues pour permettre au client d'effectuer lui-même la réparation. Pour que la garantie puisse s'appliquer, HP exige que le remplacement de la pièce soit effectué par un Mainteneur Agréé. Ces pièces sont identifiées par la mention "Non" dans le Catalogue illustré.

Les pièces CSR sont livrées le jour ouvré suivant, dans la limite des stocks disponibles et selon votre situation géographique. Si votre situation géographique le permet et que vous demandez une livraison le jour même ou dans les 4 heures, celle-ci vous sera facturée. Pour bénéficier d'une assistance téléphonique, appelez le Centre d'assistance technique HP. Dans les documents envoyés avec la pièce de rechange CSR, HP précise s'il est nécessaire de lui retourner la pièce défectueuse. Si c'est le cas, vous devez le faire dans le délai indiqué, généralement cinq (5) jours ouvrés. La pièce et sa documentation doivent être retournées dans l'emballage fourni. Si vous ne retournez pas la pièce défectueuse, HP se réserve le droit de vous facturer les coûts de remplacement. Dans le cas d'une pièce CSR, HP supporte l'ensemble des frais d'expédition et de retour, et détermine la société de courses ou le transporteur à utiliser.

Pour plus d'informations sur le programme CSR de HP, contactez votre Mainteneur Agrée local. Pour plus d'informations sur ce programme en Amérique du Nord, consultez le site Web HP (http://www.hp.com/go/selfrepair).

Service de garantie "pièces seules"

Votre garantie limitée HP peut inclure un service de garantie "pièces seules". Dans ce cas, les pièces de rechange fournies par HP ne sont pas facturées.

Dans le cadre de ce service, la réparation des pièces CSR par le client est obligatoire. Si vous demandez à HP de remplacer ces pièces, les coûts de déplacement et main d'œuvre du service vous seront facturés.

Riparazione da parte del cliente

Per abbreviare i tempi di riparazione e garantire una maggiore flessibilità nella sostituzione di parti difettose, i prodotti HP sono realizzati con numerosi componenti che possono essere riparati direttamente dal cliente (CSR, Customer Self Repair). Se in fase di diagnostica HP (o un centro di servizi o di assistenza HP) identifica il guasto come riparabile mediante un ricambio CSR, HP lo spedirà direttamente al cliente per la sostituzione. Vi sono due categorie di parti CSR:

- **Obbligatorie** – Parti che devono essere necessariamente riparate dal cliente. Se il cliente ne affida la riparazione ad HP, deve sostenere le spese di spedizione e di manodopera per il servizio.
- **Opzionali** – Parti la cui riparazione da parte del cliente è facoltativa. Si tratta comunque di componenti progettati per questo scopo. Se tuttavia il cliente ne richiede la sostituzione ad HP, potrebbe dover sostenere spese addizionali a seconda del tipo di garanzia previsto per il prodotto.

NOTA: alcuni componenti HP non sono progettati per la riparazione da parte del cliente. Per rispettare la garanzia, HP richiede che queste parti siano sostituite da un centro di assistenza autorizzato. Tali parti sono identificate da un "No" nel Catalogo illustrato dei componenti.

In base alla disponibilità e alla località geografica, le parti CSR vengono spedite con consegna entro il giorno lavorativo seguente. La consegna nel giorno stesso o entro quattro ore è offerta con un supplemento di costo solo in alcune zone. In caso di necessità si può richiedere l'assistenza telefonica di un addetto del centro di supporto tecnico HP. Nel materiale fornito con una parte di ricambio CSR, HP specifica se il cliente deve restituire dei componenti. Qualora sia richiesta la resa ad HP del componente difettoso, lo si deve spedire ad HP entro un determinato periodo di tempo, generalmente cinque (5) giorni lavorativi. Il componente difettoso deve essere restituito con la documentazione associata nell'imballo di spedizione fornito. La mancata restituzione del componente può comportare la fatturazione del ricambio da parte di HP. Nel caso di riparazione da parte del cliente, HP sostiene tutte le spese di spedizione e resa e sceglie il corriere/vettore da utilizzare.

Per ulteriori informazioni sul programma CSR di HP contattare il centro di assistenza di zona. Per il programma in Nord America fare riferimento al sito Web HP (http://www.hp.com/go/selfrepair).

Servizio di garanzia per i soli componenti

La garanzia limitata HP può includere un servizio di garanzia per i soli componenti. Nei termini di garanzia del servizio per i soli componenti, HP fornirà gratuitamente le parti di ricambio.

Per il servizio di garanzia per i soli componenti è obbligatoria la formula CSR che prevede la riparazione da parte del cliente. Se il cliente invece richiede la sostituzione ad HP, dovrà sostenere le spese di spedizione e di manodopera per il servizio.

Customer Self Repair

HP Produkte enthalten viele CSR-Teile (Customer Self Repair), um Reparaturzeiten zu minimieren und höhere Flexibilität beim Austausch defekter Bauteile zu ermöglichen. Wenn HP (oder ein HP Servicepartner) bei der Diagnose feststellt, dass das Produkt mithilfe eines CSR-Teils repariert werden kann, sendet Ihnen HP dieses Bauteil zum Austausch direkt zu. CSR-Teile werden in zwei Kategorien unterteilt:

- **Zwingend –** Teile, für die das Customer Self Repair-Verfahren zwingend vorgegeben ist. Wenn Sie den Austausch dieser Teile von HP vornehmen lassen, werden Ihnen die Anfahrt- und Arbeitskosten für diesen Service berechnet.
- **Optional –** Teile, für die das Customer Self Repair-Verfahren optional ist. Diese Teile sind auch für Customer Self Repair ausgelegt. Wenn Sie jedoch den Austausch dieser Teile von HP vornehmen lassen möchten, können bei diesem Service je nach den für Ihr Produkt vorgesehenen Garantiebedingungen zusätzliche Kosten anfallen.

HINWEIS: Einige Teile sind nicht für Customer Self Repair ausgelegt. Um den Garantieanspruch des Kunden zu erfüllen, muss das Teil von einem HP Servicepartner ersetzt werden. Im illustrierten Teilekatalog sind diese Teile mit „No“ bzw. „Nein“ gekennzeichnet.

CSR-Teile werden abhängig von der Verfügbarkeit und vom Lieferziel am folgenden Geschäftstag geliefert. Für bestimmte Standorte ist eine Lieferung am selben Tag oder innerhalb von vier Stunden gegen einen Aufpreis verfügbar. Wenn Sie Hilfe benötigen, können Sie das HP technische Support Center anrufen und sich von einem Mitarbeiter per Telefon helfen lassen. Den Materialien, die mit einem CSR-Ersatzteil geliefert werden, können Sie entnehmen, ob das defekte Teil an HP zurückgeschickt werden muss. Wenn es erforderlich ist, das defekte Teil an HP zurückzuschicken, müssen Sie dies innerhalb eines vorgegebenen Zeitraums tun, in der Regel innerhalb von fünf (5) Geschäftstagen. Das defekte Teil muss mit der zugehörigen Dokumentation in der Verpackung zurückgeschickt werden, die im Lieferumfang enthalten ist. Wenn Sie das defekte Teil nicht zurückschicken, kann HP Ihnen das Ersatzteil in Rechnung

stellen. Im Falle von Customer Self Repair kommt HP für alle Kosten für die Lieferung und Rücksendung auf und bestimmt den Kurier-/Frachtdienst.

Weitere Informationen über das HP Customer Self Repair Programm erhalten Sie von Ihrem Servicepartner vor Ort. Informationen über das CSR-Programm in Nordamerika finden Sie auf der HP Website unter (http://www.hp.com/go/selfrepair).

Parts-only Warranty Service (Garantieservice ausschließlich für Teile)

Ihre HP Garantie umfasst möglicherweise einen Parts-only Warranty Service (Garantieservice ausschließlich für Teile). Gemäß den Bestimmungen des Parts-only Warranty Service stellt HP Ersatzteile kostenlos zur Verfügung.

Für den Parts-only Warranty Service ist das CSR-Verfahren zwingend vorgegeben. Wenn Sie den Austausch dieser Teile von HP vornehmen lassen, werden Ihnen die Anfahrt- und Arbeitskosten für diesen Service berechnet.

Reparaciones del propio cliente

Los productos de HP incluyen muchos componentes que el propio usuario puede reemplazar (*Customer Self Repair*, CSR) para minimizar el tiempo de reparación y ofrecer una mayor flexibilidad a la hora de realizar sustituciones de componentes defectuosos. Si, durante la fase de diagnóstico, HP (o los proveedores o socios de servicio de HP) identifica que una reparación puede llevarse a cabo mediante el uso de un componente CSR, HP le enviará dicho componente directamente para que realice su sustitución. Los componentes CSR se clasifican en dos categorías:

- **Obligatorio:** componentes para los que la reparación por parte del usuario es obligatoria. Si solicita a HP que realice la sustitución de estos componentes, tendrá que hacerse cargo de los gastos de desplazamiento y de mano de obra de dicho servicio.
- **Opcional:** componentes para los que la reparación por parte del usuario es opcional. Estos componentes también están diseñados para que puedan ser reparados por el usuario. Sin embargo, si precisa que HP realice su sustitución, puede o no conllevar costes adicionales, dependiendo del tipo de servicio de garantía correspondiente al producto.

NOTA: Algunos componentes no están diseñados para que puedan ser reparados por el usuario. Para que el usuario haga valer su garantía, HP pone como condición que un proveedor de servicios autorizado realice la sustitución de estos componentes. Dichos componentes se identifican con la palabra "No" en el catálogo ilustrado de componentes.

Según la disponibilidad y la situación geográfica, los componentes CSR se enviarán para que lleguen a su destino al siguiente día laborable. Si la situación geográfica lo permite, se puede solicitar la entrega en el mismo día o en cuatro horas con un coste adicional. Si precisa asistencia técnica, puede llamar al Centro de asistencia técnica de HP y recibirá ayuda telefónica por parte de un técnico. Con el envío de materiales para la sustitución de componentes CSR, HP especificará si los componentes defectuosos deberán devolverse a HP. En aquellos casos en los que sea necesario devolver algún componente a HP, deberá hacerlo en el periodo de tiempo especificado, normalmente cinco días laborables. Los componentes defectuosos deberán devolverse con toda la documentación relacionada y con el embalaje de envío. Si no enviara el componente defectuoso requerido, HP podrá cobrarle por el de sustitución. En el caso de todas sustituciones que lleve a cabo el cliente, HP se hará cargo de todos los gastos de envío y devolución de componentes y escogerá la empresa de transporte que se utilice para dicho servicio.

Para obtener más información acerca del programa de Reparaciones del propio cliente de HP, póngase en contacto con su proveedor de servicios local. Si está interesado en el programa para Norteamérica, visite la página web de HP siguiente (http://www.hp.com/go/selfrepair).

Servicio de garantía exclusivo de componentes

La garantía limitada de HP puede que incluya un servicio de garantía exclusivo de componentes. Según las condiciones de este servicio exclusivo de componentes, HP le facilitará los componentes de repuesto sin cargo adicional alguno.

Para este servicio de garantía exclusivo de componentes, es obligatoria la sustitución de componentes por parte del usuario (CSR). Si solicita a HP que realice la sustitución de estos componentes, tendrá que hacerse cargo de los gastos de desplazamiento y de mano de obra de dicho servicio.

Customer Self Repair

Veel onderdelen in HP producten zijn door de klant zelf te repareren, waardoor de reparatieduur tot een minimum beperkt kan blijven en de flexibiliteit in het vervangen van defecte onderdelen groter is. Deze onderdelen worden CSR-onderdelen (Customer Self Repair) genoemd. Als HP (of een HP Service Partner) bij de diagnose vaststelt dat de reparatie kan worden uitgevoerd met een CSR-onderdeel, verzendt HP dat onderdeel rechtstreeks naar u, zodat u het defecte onderdeel daarmee kunt vervangen. Er zijn twee categorieën CSR-onderdelen:

- **Verplicht:** Onderdelen waarvoor reparatie door de klant verplicht is. Als u HP verzoekt deze onderdelen voor u te vervangen, worden u voor deze service reiskosten en arbeidsloon in rekening gebracht.
- **Optioneel:** Onderdelen waarvoor reparatie door de klant optioneel is. Ook deze onderdelen zijn ontworpen voor reparatie door de klant. Als u echter HP verzoekt deze onderdelen voor u te vervangen, kunnen daarvoor extra kosten in rekening worden gebracht, afhankelijk van het type garantieservice voor het product.

OPMERKING: Sommige HP onderdelen zijn niet ontwikkeld voor reparatie door de klant. In verband met de garantievoorwaarden moet het onderdeel door een geautoriseerde Service Partner worden vervangen. Deze onderdelen worden in de geïllustreerde onderdelencatalogus aangemerkt met "Nee".

Afhankelijk van de leverbaarheid en de locatie worden CSR-onderdelen verzonden voor levering op de eerstvolgende werkdag. Levering op dezelfde dag of binnen vier uur kan tegen meerkosten worden aangeboden, indien dit mogelijk is gezien de locatie. Indien assistentie gewenst is, belt u een HP Service Partner om via de telefoon technische ondersteuning te ontvangen. HP vermeldt in de documentatie bij het vervangende CSR-onderdeel of het defecte onderdeel aan HP moet worden geretourneerd. Als het defecte onderdeel aan HP moet worden teruggezonden, moet u het defecte onderdeel binnen een bepaalde periode, gewoonlijk vijf (5) werkdagen, retourneren aan HP. Het defecte onderdeel moet met de bijbehorende documentatie worden geretourneerd in het meegeleverde verpakkingsmateriaal. Als u het defecte onderdeel niet terugzendt, kan HP u voor het vervangende onderdeel kosten in rekening brengen. Bij reparatie door de klant betaalt HP alle verzendkosten voor het vervangende en geretourneerde onderdeel en kiest HP zelf welke koerier/transportonderneming hiervoor wordt gebruikt.

Neem contact op met een Service Partner voor meer informatie over het Customer Self Repair programma van HP. Informatie over Service Partners vindt u op de HP website (http://www.hp.nl/services/servicepartners).

Garantieservice "Parts Only"

Het is mogelijk dat de HP garantie alleen de garantieservice "Parts Only" omvat. Volgens de bepalingen van de Parts Only garantieservice zal HP kosteloos vervangende onderdelen ter beschikking stellen.

Voor de Parts Only garantieservice is vervanging door CSR-onderdelen verplicht. Als u HP verzoekt deze onderdelen voor u te vervangen, worden u voor deze service reiskosten en arbeidsloon in rekening gebracht.

Reparo feito pelo cliente

Os produtos da HP são projetados com muitas peças para reparo feito pelo cliente (CSR) de modo a minimizar o tempo de reparo e permitir maior flexibilidade na substituição de peças com defeito. Se, durante o período de diagnóstico, a HP (ou fornecedores/parceiros de serviço da HP) concluir que o reparo pode ser efetuado pelo uso de uma peça CSR, a peça de reposição será enviada diretamente ao cliente. Existem duas categorias de peças CSR:

- **Obrigatória** – Peças cujo reparo feito pelo cliente é obrigatório. Se desejar que a HP substitua essas peças, serão cobradas as despesas de transporte e mão-de-obra do serviço.
- **Opcional** – Peças cujo reparo feito pelo cliente é opcional. Essas peças também são projetadas para o reparo feito pelo cliente. No entanto, se desejar que a HP as substitua, pode haver ou não a cobrança de taxa adicional, dependendo do tipo de serviço de garantia destinado ao produto.

OBSERVAÇÃO: Algumas peças da HP não são projetadas para o reparo feito pelo cliente. A fim de cumprir a garantia do cliente, a HP exige que um técnico autorizado substitua a peça. Essas peças estão identificadas com a marca "No" (Não), no catálogo de peças ilustrado.

Conforme a disponibilidade e o local geográfico, as peças CSR serão enviadas no primeiro dia útil após o pedido. Onde as condições geográficas permitirem, a entrega no mesmo dia ou em quatro horas pode ser feita mediante uma taxa adicional. Se precisar de auxílio, entre em contato com o Centro de suporte técnico da HP para que um técnico o ajude por telefone. A HP especifica nos materiais fornecidos com a peça CSR de reposição se a peça com defeito deve ser devolvida à HP. Nos casos em que isso for necessário, é preciso enviar a peça com defeito à HP dentro do período determinado, normalmente cinco (5) dias úteis. A peça com defeito deve ser enviada com a documentação correspondente no material de transporte fornecido. Caso não o faça, a HP poderá cobrar a reposição. Para as peças de reparo feito pelo cliente, a HP paga todas as despesas de transporte e de devolução da peça e determina a transportadora/serviço postal a ser utilizado.

Para obter mais informações sobre o programa de reparo feito pelo cliente da HP, entre em contato com o fornecedor de serviços local. Para o programa norte-americano, visite o site da HP (http://www.hp.com/go/selfrepair).

Serviço de garantia apenas para peças

A garantia limitada da HP pode incluir um serviço de garantia apenas para peças. Segundo os termos do serviço de garantia apenas para peças, a HP fornece as peças de reposição sem cobrar nenhuma taxa.

No caso desse serviço, a substituição de peças CSR é obrigatória. Se desejar que a HP substitua essas peças, serão cobradas as despesas de transporte e mão-de-obra do serviço.

顧客自己修理保証サービス

修理時間を短縮し、故障部品の交換における高い柔軟性を確保するために、HP製品には多数の顧客自己修理（CSR）部品があります。診断の際に、CSR部品を使用すれば修理ができるとHP（HPまたはHP正規保守代理店）が判断した場合、HPはその部品を直接、お客様に発送し、お客様に交換していただきます。CSR部品には以下の2通りがあります。

- 必須 - 顧客自己修理が必須の部品。当該部品について、もしもお客様がHPに交換作業を依頼される場合には、その修理サービスに関する交通費および人件費がお客様に請求されます。
- 任意 - 顧客自己修理が任意である部品。この部品も顧客自己修理用です。当該部品について、もしもお客様がHPに交換作業を依頼される場合には、お買い上げの製品に適用される保証サービス内容の範囲内においては、別途費用を負担していただくことなく保証サービスを受けることができます。

注：HP製品の一部の部品は、顧客自己修理用ではありません。製品の保証を継続するためには、HPまたはHP正規保守代理店による交換作業が必須となります。部品カタログには、当該部品が顧客自己修理除外品である旨が記載されています。

部品供給が可能な場合、地域によっては、CSR部品を翌営業日に届くように発送します。また、地域によっては、追加費用を負担いただくことにより同日または4時間以内に届くように発送することも可能な場合があります。サポートが必要なときは、HPの修理受付窓口に電話していただければ、技術者が電話でアドバイスします。交換用のCSR部品または同梱物には、故障部品をHPに返送する必要があるかどうかが表示されています。故障部品をHPに返送する必要がある場合は、指定期限内（通常は5営業日以内）に故障部品をHPに返送してください。故障部品を返送する場合は、届いた時の梱包箱に関連書類とともに入れてください。故障部品を返送しない場合、HPから部品費用が請求されます。顧客自己修理の際には、HPは送料および部品返送費を全額負担し、使用する宅配便会社や運送会社を指定します。

部品のみ保証サービス

HP保証サービスには、部品のみ保証サービスが適用される場合があります。このサービスでは、交換部品は無償で提供されます。

部品のみ保証サービスにおいては、CSR部品をお客様により交換作業していただくことが必須となります。当該部品について、もしもお客様がHPに交換作業を依頼される場合には、その修理サービスに関する交通費および人件費はお客様の負担となります。

客户自行维修

HP 产品提供许多客户自行维修 (CSR) 部件，以尽可能缩短维修时间和在更换缺陷部件方面提供更大的灵活性。如果在诊断期间 HP（或 HP 服务提供商或服务合作伙伴）确定可以通过使用 CSR 部件完成维修，HP 将直接把该部件发送给您进行更换。有两类 CSR 部件：

- **强制性的** — 要求客户必须自行维修的部件。如果您请求 HP 更换这些部件，则必须为该服务支付差旅费和人工费用。
- **可选的** — 客户可以选择是否自行维修的部件。这些部件也是为客户自行维修设计的。不过，如果您要求 HP 为您更换这些部件，则根据为您的产品指定的保修服务类型，HP 可能收取或不再收取任何附加费用。

注：某些 HP 部件的设计并未考虑客户自行维修。为了满足客户保修的需要，HP 要求授权服务提供商更换相关部件。这些部件在部件图解目录中标记为“否”。

CSR 部件将在下一个工作日发运（取决于备货情况和允许的地理范围）。在允许的地理范围内，可在当天或四小时内发运，但要收取额外费用。如果需要帮助，您可以致电 HP 技术支持中心，将会有技术人员通过电话为您提供帮助。HP 会在随更换的 CSR 部件发运的材料中指明是否必须将有缺陷的部件返还给 HP。如果要求您将有缺陷的部件返还给 HP，那么您必须在规定期限内（通常是五 (5) 个工作日）将缺陷部件发给 HP。有缺陷的部件必须随所提供的发运材料中的相关文件一起返还。如果未能送还有缺陷的部件，HP 可能会要求您支付更换费用。客户自行维修时，HP 将承担所有相关运输和部件返回费用，并指定快递商/承运商。

有关 HP 客户自行维修计划的详细信息，请与您当地的服务提供商联系。有关北美地区的计划，请访问 HP 网站 (http://www.hp.com/go/selfrepair)。

仅部件保修服务

您的 HP 有限保修服务可能涉及仅部件保修服务。根据仅部件保修服务条款的规定，HP 将免费提供更换的部件。

仅部件保修服务要求进行 CSR 部件更换。如果您请求 HP 更换这些部件，则必须为该服务支付差旅费和人工费用。

客戶自行維修

HP 產品設計了許多「客戶自行維修」(CSR) 的零件以減少維修時間，並且使得更換瑕疵零件時能有更大的彈性。如果在診斷期間 HP（或 HP 服務供應商或維修夥伴）辨認出此項維修工作可以藉由使用 CSR 零件來完成，則 HP 將直接寄送該零件給您作更換。CSR 零件分為兩種類別：

- **強制的** — 客戶自行維修所使用的零件是強制性的。如果您要求 HP 更換這些零件，HP 將會向您收取此服務所需的外出費用與勞動成本。
- **選購的** — 客戶自行維修所使用的零件是選購的。這些零件也設計用於客戶自行維修之用。不過，如果您要求 HP 為您更換，則可能需要也可能不需要負擔額外的費用，端視針對此產品指定的保固服務類型而定。

備註：某些 HP 零件沒有消費者可自行維修的設計。為符合客戶保固，HP 需要授權的服務供應商更換零件。這些零件在圖示的零件目錄中，被標示為「否」。

基於材料取得及環境允許的情況下，CSR 零件將於下一個工作日以快遞寄送。在環境的允許下當天或四小時內送達，則可能需要額外的費用。若您需要協助，可致電「HP 技術支援中心」，會有一位技術人員透過電話來協助您。不論損壞的零件是否必須退回，HP 皆會在與 CSR 替換零件一起運送的材料中註明。若要將損壞的零件退回 HP，您必須在指定的一段時間內（通常為五 (5) 個工作天），將損壞的零件寄回 HP。損壞的零件必須與寄送資料中隨附的相關技術文件一併退還。如果無法退還損壞的零件，HP 可能要向您收取替換費用。針對客戶自行維修情形，HP 將負責所有運費及零件退還費用並指定使用何家快遞/貨運公司。

如需 HP 的「客戶自行維修」方案詳細資訊，請連絡您當地的服務供應商。至於北美方案，請參閱 HP 網站 (http://www.hp.com/go/selfrepair)。

僅限零件的保固服務

您的「HP 有限保固」可能包含僅限零件的保固服務。在僅限零件的保固服務情況下，HP 將免費提供替換零件。

針對僅限零件的保固服務，CSR 零件替換是強制性的。如果您要求 HP 更換這些零件，HP 將會向您收取此服務所需的外出費用與勞動成本。

고객 셀프 수리

HP 제품은 수리 시간을 최소화하고 결함이 있는 부품 교체 시 더욱 융통성을 발휘할 수 있도록 하기 위해 고객 셀프 수리(CSR) 부품을 다량 사용하여 설계되었습니다. 진단 기간 동안 HP(또는 HP 서비스 공급업체 또는 서비스 협력업체)에서 CSR 부품을 사용하여 수리가 가능하다고 판단되면 HP는 해당 부품을 바로 사용자에게 보내어 사용자가 교체할 수 있도록 합니다. CSR 부품에는 두 가지 종류가 있습니다.

- **고객 셀프 수리가 의무 사항인 필수 부품.** 사용자가 HP에 이 부품의 교체를 요청할 경우 이 서비스에 대한 출장비 및 작업비가 청구됩니다.
- **고객 셀프 수리가 선택 사항인 부품.** 이 부품들도 고객 셀프 수리가 가능하도록 설계되었습니다. 하지만 사용자가 HP에 이 부품의 교체를 요청할 경우 사용자가 구입한 제품에 해당하는 보증 서비스 유형에 따라 추가 비용 없이 교체가 가능할 수 있습니다.

참고: 일부 HP 부품은 고객 셀프 수리가 불가능하도록 설계되었습니다. HP는 만족스러운 고객 보증을 위해 공인 서비스 제공업체를 통해 부품을 교체하도록 하고 있습니다. 이러한 부품들은 Illustrated Parts Catalog에 "No"라고 표시되어 있습니다.

CSR 부품은 재고 상태와 지리적 조건이 허용하는 경우 다음 영업일 납품이 가능하도록 배송이 이루어집니다. 지리적 조건이 허용하는 경우 추가 비용이 청구되는 조건으로 당일 또는 4시간 배송이 가능할 수도 있습니다. 도움이 필요하시면 HP 기술 지원 센터로 전화하십시오. 전문 기술자가 전화로 도움을 줄 것입니다. HP는 결함이 발생한 부품을 HP로 반환해야 하는지 여부를 CSR 교체 부품과 함께 배송된 자료에 지정합니다. 결함이 발생한 부품을 HP로 반환해야 하는 경우에는 지정된 기간 내(통상 영업일 기준 5일)에 HP로 반환해야 합니다. 이 때 결함이 발생한 부품은 제공된 포장 재료에 넣어 관련 설명서와 함께 반환해야 합니다. 결함이 발생한 부품을 반환하지 않는 경우 HP가 교체 부품에 대해 비용을 청구할 수 있습니다. 고객 셀프 수리의 경우, HP는 모든 운송 및 부품 반환 비용을 부담하며 이용할 운송업체 및 택배 서비스를 결정합니다.

HP 고객 셀프 수리 프로그램에 대한 자세한 내용은 가까운 서비스 제공업체에 문의하십시오. 북미 지역의 프로그램에 대해서는 HP 웹 사이트(http://www.hp.com/go/selfrepair)를 참조하십시오.

부품 제공 보증 서비스

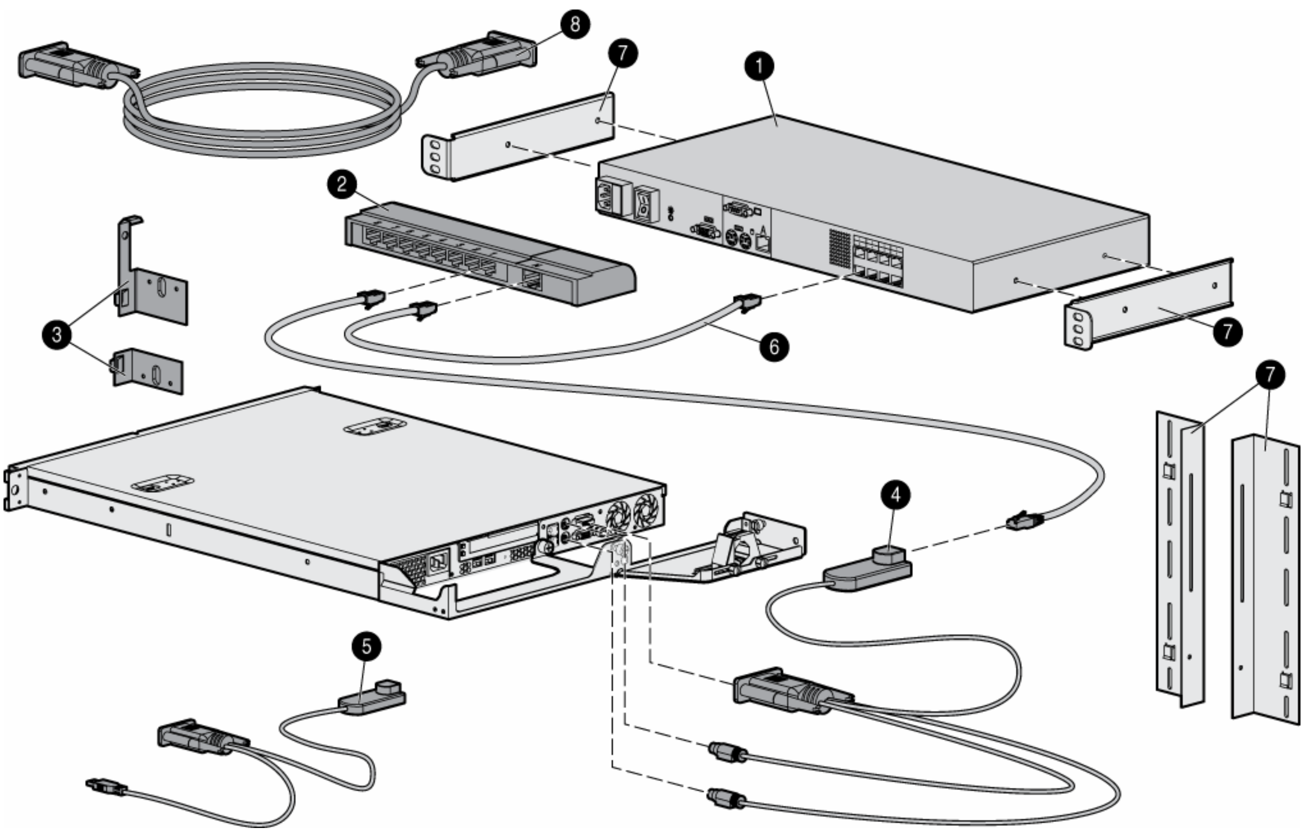
HP 제한 보증에는 부품 제공 보증 서비스가 포함될 수 있습니다. 이러한 경우 HP는 부품 제공 보증 서비스의 조건에 따라 교체 부품만을 무료로 제공합니다.

부품 제공 보증 서비스 제공 시 CSR 부품 교체는 의무 사항입니다. 사용자가 HP에 이 부품의 교체를 요청할 경우 이 서비스에 대한 출장비 및 작업비가 청구됩니다.

Illustrated parts catalog

In this section

Exploded view



Item	Description	Original spare part number	Modified spare part number	Customer self repair (on page 6)
1	SPS—SWITCHBOX, 1U, RCKMNT, 1 x 8 SPS—SWITCHBOX, 1U, RCKMNT, 2 x 16	340386-001‡ See requirement 340387-001‡ See requirement	396630-001 396631-001	No[3]
2	SPS—BD, EXPN MOD, KYBD/IVD, MSE	286600-001‡ See requirement	396635-001	No[3]

Item	Description	Original spare part number	Modified spare part number	Customer self repair (on page 6)
3	SPS—BRKT, EXPSN MOD, KVM/IP	306808-001	—	No[3]
4	SPS—ADPTR, INTFC, KYBD/VID/MSE, PS/2	286597-001‡ See requirement	396632-001	No[3]
5	SPS—ADPTR, INTFC, KYBD/VID/MSE, USB	340388-001‡ See requirement	396633-001	No[3]
6	SPS—CBL, KYBD/VID/MSE, CT5, 3FT SPS—CBL, KYBD/VID/MSE, CT5, 6FT SPS—CBL, KYBD/VID/MSE, CT5, 12FT SPS—CBL, KYBD/VID/MSE, CT5, 20FT SPS—CBL, KYBD/VID/MSE, CT5, 40FT	286592-001 286593-001 286594-001 286595-001 286596-001	—	No[3]
7	SPS—HDWE, MNT KIT, CNSL, KVM SWT	341519-001	—	No[3]
8	SPS—CA & HDWE KIT, MISC	154020-001	—	No[3]
9	SPS—ADAPTER, SERIAL INTERFACE*	375203-001‡ See requirement	396634-001	No[3]

* not shown

‡**REQUIREMENT:**
For Customers in the EU only.
The use of the Original Spare part is regulated by RoHS legislation§.
If your unit contains a part that is labelled with the Modified Spare number, the Modified Spare must be ordered as the replacement part in the EU.
If your unit contains a part that is labelled with the Original Spare number, please order the Original Spare as the replacement part in the EU. In this case either the Original Spare or the Modified Spare may be shipped which will not affect performance or functionality of the unit.
§*Directive 2002/95/EC restricts the use of lead, mercury, cadmium, hexavalent chromium, PBBs and PBDEs in electronic products.*
[1]Mandatory—Parts for which customer self repair is mandatory. If you request HP to replace these parts, you will be charged for the travel and labor costs of this service.
[2]Optional—Parts for which customer self repair is optional. These parts are also designed for customer self repair. If, however, you require that HP replace them for you, there may or may not be additional charges, depending on the type of warranty service designated for your product.
[3]No—Some HP parts are not designed for customer self repair. In order to satisfy the customer warranty, HP requires that an authorized service provider replace the part. These parts are identified as "No" in the Illustrated Parts Catalog.

[1]Mandatory: Obligatoire—Pièces pour lesquelles la réparation par le client est obligatoire. Si vous demandez à HP de remplacer ces pièces, les coûts de déplacement et main d'œuvre du service vous seront facturés.
[2]Optional: Facultatif—Pièces pour lesquelles la réparation par le client est facultative. Ces pièces sont également conçues pour permettre au client d'effectuer lui-même la réparation. Toutefois, si vous demandez à HP de remplacer ces pièces, l'intervention peut ou non vous être facturée, selon le type de garantie applicable à votre produit.
[3]No: Non—Certaines pièces HP ne sont pas conçues pour permettre au client d'effectuer lui-même la réparation. Pour que la garantie puisse s'appliquer, HP exige que le remplacement de la pièce soit effectué par un Mainteneur Agréé. Ces pièces sont identifiées par la mention “Non” dans le Catalogue illustré.

[1]Mandatory: Obbligatorie—Parti che devono essere necessariamente riparate dal cliente. Se il cliente ne affida la riparazione ad HP, deve sostenere le spese di spedizione e di manodopera per il servizio.

[2]Optional: Opzionali—Parti la cui riparazione da parte del cliente è facoltativa. Si tratta comunque di componenti progettati per questo scopo. Se tuttavia il cliente ne richiede la sostituzione ad HP, potrebbe dover sostenere spese addizionali a seconda del tipo di garanzia previsto per il prodotto.
[3]No: Non CSR—Alcuni componenti HP non sono progettati per la riparazione da parte del cliente. Per rispettare la garanzia, HP richiede che queste parti siano sostituite da un centro di assistenza autorizzato. Tali parti sono identificate da un "No" nel Catalogo illustrato dei componenti.

[1]Mandatory: Zwingend—Teile, die im Rahmen des Customer Self Repair Programms ersetzt werden müssen. Wenn Sie diese Teile von HP ersetzen lassen, werden Ihnen die Versand- und Arbeitskosten für diesen Service berechnet.
[2]Optional: Optional—Teile, für die das Customer Self Repair-Verfahren optional ist. Diese Teile sind auch für Customer Self Repair ausgelegt. Wenn Sie jedoch den Austausch dieser Teile von HP vornehmen lassen möchten, können bei diesem Service je nach den für Ihr Produkt vorgesehenen Garantiebedingungen zusätzliche Kosten anfallen.
[3]No: Kein—Einige Teile sind nicht für Customer Self Repair ausgelegt. Um den Garantieanspruch des Kunden zu erfüllen, muss das Teil von einem HP Servicepartner ersetzt werden. Im illustrierten Teilekatalog sind diese Teile mit „No" bzw. „Nein" gekennzeichnet.

[1]Mandatory: Obligatorio—componentes para los que la reparación por parte del usuario es obligatoria. Si solicita a HP que realice la sustitución de estos componentes, tendrá que hacerse cargo de los gastos de desplazamiento y de mano de obra de dicho servicio.
[2]Optional: Opcional— componentes para los que la reparación por parte del usuario es opcional. Estos componentes también están diseñados para que puedan ser reparados por el usuario. Sin embargo, si precisa que HP realice su sustitución, puede o no conllevar costes adicionales, dependiendo del tipo de servicio de garantía correspondiente al producto.
[3]No: No—Algunos componentes no están diseñados para que puedan ser reparados por el usuario. Para que el usuario haga valer su garantía, HP pone como condición que un proveedor de servicios autorizado realice la sustitución de estos componentes. Dichos componentes se identifican con la palabra "No" en el catálogo ilustrado de componentes.

[1]Mandatory: Verplicht—Onderdelen waarvoor Customer Self Repair verplicht is. Als u HP verzoekt deze onderdelen te vervangen, komen de reiskosten en het arbeidsloon voor uw rekening.
[2]Optional: Optioneel—Onderdelen waarvoor reparatie door de klant optioneel is. Ook deze onderdelen zijn ontworpen voor reparatie door de klant. Als u echter HP verzoekt deze onderdelen voor u te vervangen, kunnen daarvoor extra kosten in rekening worden gebracht, afhankelijk van het type garantieservice voor het product.
[3]No: Nee—Sommige HP onderdelen zijn niet ontwikkeld voor reparatie door de klant. In verband met de garantievoorwaarden moet het onderdeel door een geautoriseerde Service Partner worden vervangen. Deze onderdelen worden in de geïllustreerde onderdelencatalogus aangemerkt met "Nee".

[1]Mandatory: Obrigatória—Peças cujo reparo feito pelo cliente é obrigatório. Se desejar que a HP substitua essas peças, serão cobradas as despesas de transporte e mão-de-obra do serviço.
[2]Optional: Opcional—Peças cujo reparo feito pelo cliente é opcional. Essas peças também são projetadas para o reparo feito pelo cliente. No entanto, se desejar que a HP as substitua, pode haver ou não a cobrança de taxa adicional, dependendo do tipo de serviço de garantia destinado ao produto.
[3]No: Nenhuma—Algumas peças da HP não são projetadas para o reparo feito pelo cliente. A fim de cumprir a garantia do cliente, a HP exige que um técnico autorizado substitua a peça. Essas peças estão identificadas com a marca "No" (Não), no catálogo de peças ilustrado.

[1]Mandatory：必須 - 顧客自己修理が必須の部品。当該部品について、もしもお客様がHPに交換作業を依頼される場合には、その修理サービスに関する交通費および人件費がお客様に請求されます。

[2]Optional：任意 - 顧客自己修理が任意である部品。この部品も顧客自己修理用です。当該部品について、もしもお客様がHPに交換作業を依頼される場合には、お買い上げの製品に適用される保証サービス内容の範囲内においては、費用を負担していただくことなく保証サービスを受けることができます。

[3]No：除外 - HP製品の一部の部品は、顧客自己修理用ではありません。製品の保証を継続するためには、HPまたはHP正規保守代理店による交換作業が必須となります。部品カタログには、当該部品が顧客自己修理除外品である旨が記載されています。

[1]Mandatory: 强制性的 — 要求客户必须自行维修的部件。如果您请求 HP 更换这些部件，则必须为该服务支付差旅费和人工费用。

[2]Optional: 可选的 — 客户可以选择是否自行维修的部件。这些部件也是为客户自行维修设计的。不过，如果您要求 HP 为您更换这些部件，则根据为您的产品指定的保修服务类型，HP 可能收取或不再收取任何附加费用。

[3]No: 否 — 某些 HP 部件的设计并未考虑客户自行维修。为了满足客户保修的需要，HP 要求授权服务提供商更换相关部件。这些部件在部件图解目录中标记为“否”。

[1]Mandatory: 強制的 — 客戶自行維修所使用的零件是強制性的。如果您要求 HP 更換這些零件，HP 將會向您收取此服務所需的外出費用與勞動成本。

[2]Optional: 選購的 — 客戶自行維修所使用的零件是選購的。這些零件也設計用於客戶自行維修之用。不過，如果您要求 HP 為您更換，則可能需要也可能不需要負擔額外的費用，端視針對此產品指定的保固服務類型而定。

[3]No: 否 — 某些 HP 零件沒有消費者可自行維修的設計。為符合客戶保固，HP 需要授權的服務供應商更換零件。這些零件在圖示的零件目錄中，被標示為「否」。

[1] Mandatory: 필수 — 고객 셀프 수리가 의무 사항인 필수 부품. 사용자가 HP에 이 부품의 교체를 요청할 경우 이 서비스에 대한 출장비 및 작업비가 청구됩니다.

[2] Optional: 옵션 — 고객 셀프 수리가 선택 사항인 부품. 이 부품들도 고객 셀프 수리가 가능하도록 설계되었습니다. 하지만 사용자가 HP에 이 부품의 교체를 요청할 경우 사용자가 구입한 제품에 해당하는 보증 서비스 유형에 따라 추가 비용 없이 교체가 가능할 수 있습니다.

[3] No: No — 고객 셀프 수리가 불가능하도록 설계된 HP 부품. 이 부품들은 고객 셀프 수리가 불가능하도록 설계되었습니다. HP는 고객 보증을 만족시키기 위해 공인 서비스 제공업체를 통해 부품을 교체하도록 하고 있습니다.

System components



Item	Description
1	KVM Server Console Switch
2	Expansion Module

Item	Description
3	PS/2 Interface Adapter
4	USB Interface Adapter
5	UTP CAT5 cable

Replaceable spare parts

In this section

HP KVM Server Console Switch spares kit



Description	Original spare part number	Modified spare part number
SPS—SWITCH, SVR CNSL, KVM, 0 x 1 x 8	340386-001‡ See requirement	396630-001
SPS—SWITCH, SVR CNSL, KVM, 0 x 2 x 16	340387-001‡ See requirement	396631-001

‡**REQUIREMENT:**
For Customers in the EU only.
The use of the Original Spare part is regulated by RoHS legislation§.
If your unit contains a part that is labelled with the Modified Spare number, the Modified Spare must be ordered as the replacement part in the EU.
If your unit contains a part that is labelled with the Original Spare number, please order the Original Spare as the replacement part in the EU. In this case either the Original Spare or the Modified Spare may be shipped which will not affect performance or functionality of the unit.
§*Directive 2002/95/EC restricts the use of lead, mercury, cadmium, hexavalent chromium, PBBs and PBDEs in electronic products.*

Console switch hardware spares kit



341519-001 SPS—HDWE, MNT KIT, CNSL, KVM SWT

Interface adapter spares kits



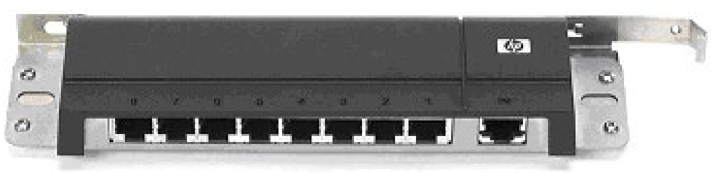


Description	Original spare part number	Modified spare part number
SPS—ADPTR, INTFC, KVM, USB	340388-001‡ See requirement	396633-001
SPS—ADPTR, INTFC, KYBD/VID/MSE, PS/2	286597-001‡ See requirement	396632-001
SPS—ADAPTER, SERIAL INTERFACE*	375203-001‡ See requirement	396634-001

* not shown

‡**REQUIREMENT:**
For Customers in the EU only.
The use of the Original Spare part is regulated by RoHS legislation§.
If your unit contains a part that is labelled with the Modified Spare number, the Modified Spare must be ordered as the replacement part in the EU.
If your unit contains a part that is labelled with the Original Spare number, please order the Original Spare as the replacement part in the EU. In this case either the Original Spare or the Modified Spare may be shipped which will not affect performance or functionality of the unit.
§*Directive 2002/95/EC restricts the use of lead, mercury, cadmium, hexavalent chromium, PBBs and PBDEs in electronic products.*

Expansion module spares kit



Description	Original spare part number	Modified spare part number
SPS—BD-EXPN MOD, KYBD/VID/MSE	286600-001‡ See requirement	396635-001

‡**REQUIREMENT:**
For Customers in the EU only.
The use of the Original Spare part is regulated by RoHS legislation§.
If your unit contains a part that is labelled with the Modified Spare number, the Modified Spare must be ordered as the replacement part in the EU.
If your unit contains a part that is labelled with the Original Spare number, please order the Original Spare as the replacement part in the EU. In this case either the Original Spare or the Modified Spare may be shipped which will not affect performance or functionality of the unit.
§*Directive 2002/95/EC restricts the use of lead, mercury, cadmium, hexavalent chromium, PBBs and PBDEs in electronic products.*

Expansion module hardware spares kit



306808-001 SPS—BRKT, EXPSN MOD, KVM/IP

UTP CAT5 cable spares kit



Description	Spare part number
SPS—CBL, KYBD/VID/MSE, CT5, 3FT	286592-001
SPS—CBL, KYBD/VID/MSE, CT5, 6FT	286593-001
SPS—CBL, KYBD/VID/MSE, CT5, 12FT	286594-001
SPS—CBL, KYBD/VID/MSE, CT5, 20FT	286595-001
SPS—CBL, KYBD/VID/MSE, CT5, 40FT	286596-001

Serial cable spares kit



154020-001 SPS—CA & HDWE KIT, MISC

Removal and replacement procedures

In this section

Safety considerations

Important Safety Information

Before servicing this product, read the *Important Safety Information* document provided with the console switch.

To access some components and perform certain service procedures, you must perform one or both of the following procedures:

- Power down the console switch and any attached devices.
- Remove the console switch.

  If the rack environment, cabling configuration, or the console switch location in the rack creates awkward conditions, remove the console switch from the rack.

Required tools

The following tools are required for some procedures:

- Phillips screwdriver
- Cage nut insertion tool (included with your original rack hardware kit)

Removal and replacement procedure tips

After completing all necessary removal and replacement procedures, power on any attached devices to be sure that all components are operating properly.

IMPORTANT: As you are removing the console switch components, be sure to retain the screws in a safe place and separate them according to their type.

Removing the console switch

1. Power down the console switch and any attached devices.
2. Disconnect all cabling.

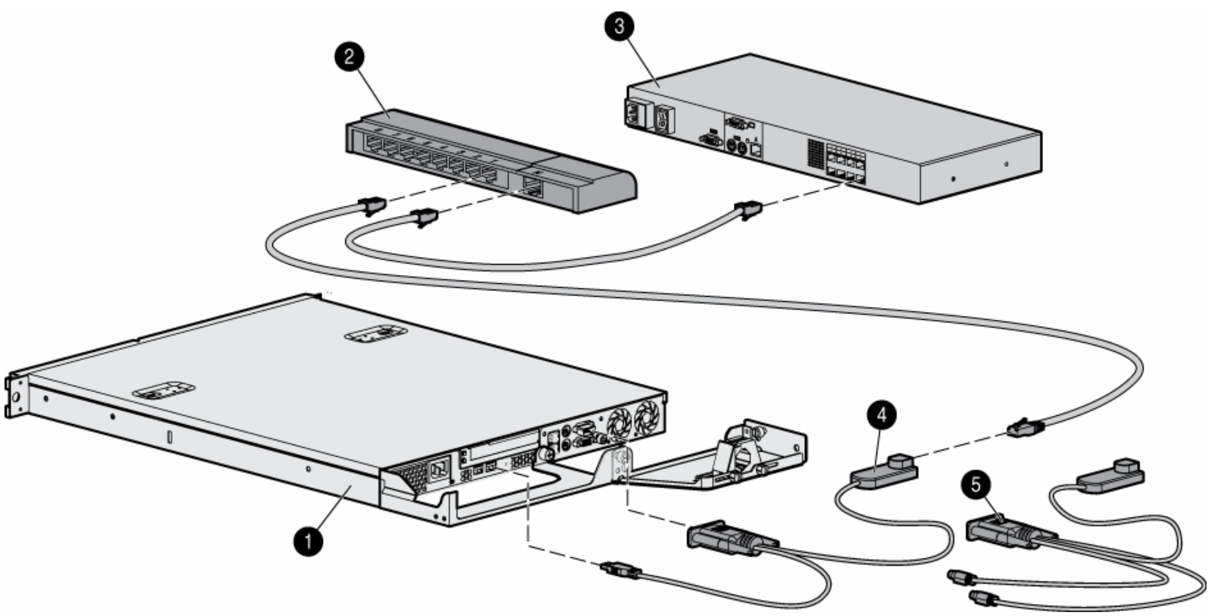
NOTE: Identification labels are provided on the UTP CAT5 cables to mark the ports to which they are connected.

3. Remove the console switch.

Replacing the console switch

1. Mount the console switch in the rack.
2. Connect the expansion module ("Replacing the expansion module" on page 42).
3. Connect the interface adapter ("Replacing the interface adapter" on page 43).
4. Power on the console switch. The activity indicator light powers on.
5. Power on the monitor.
6. Power up the server.
7. Update the console switch firmware ("Updating the console switch firmware" on page 59).
8. Update the interface adapter firmware. ("Updating the interface adapter firmware" on page 60)
9. Update the cascaded console switch firmware, if necessary ("Updating the cascaded console switch firmware" on page 59).

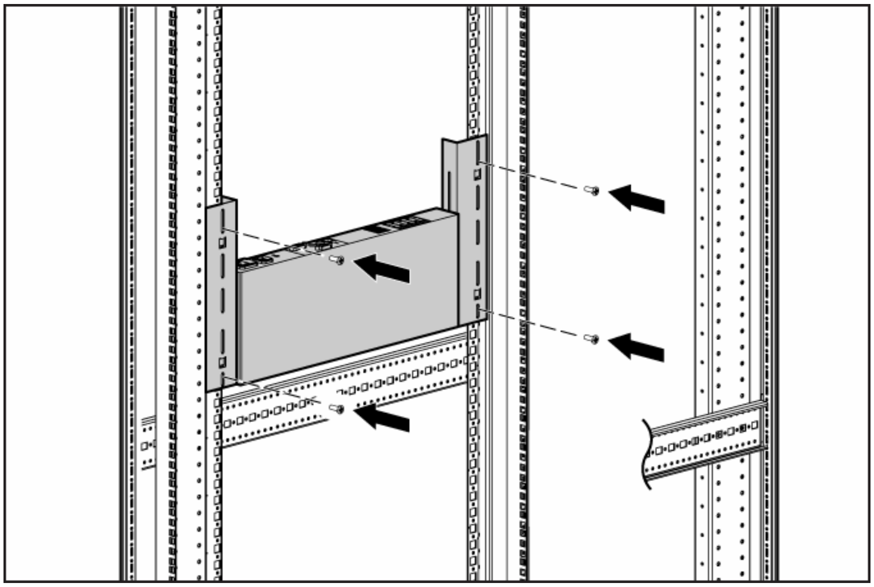
The following figure shows one possible configuration for your console switch system.



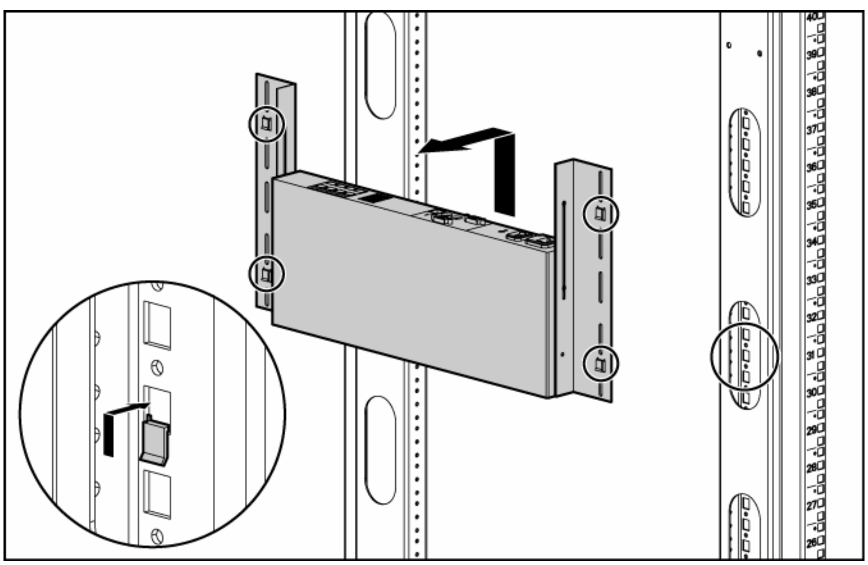
Item	Description
1	Server
2	Expansion module
3	Console switch
4	USB Interface Adapter
5	PS/2 Interface Adapter

Removing the console switch side-mount hardware

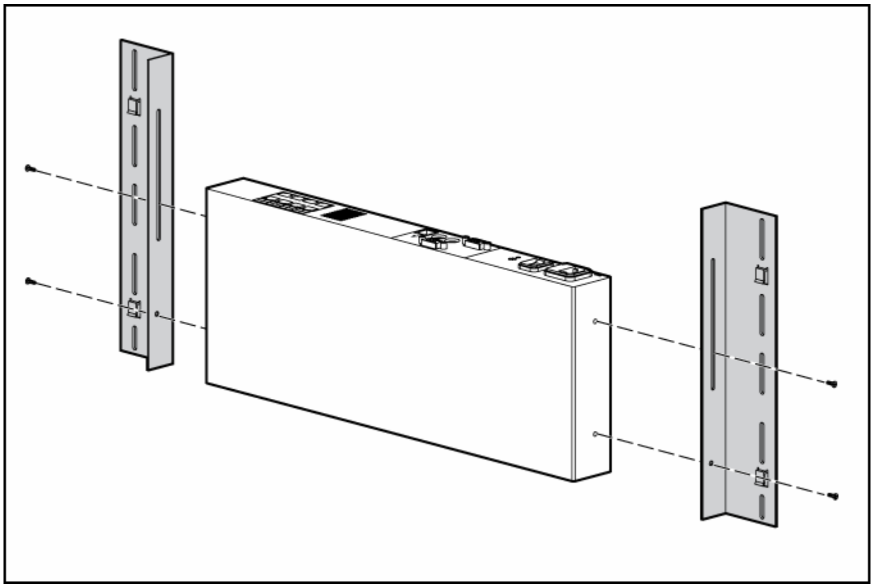
1. Remove the screws securing the console switch to the rail.



2. Remove the cage nuts, if necessary.
3. Lift the side-mounting brackets up and away from the rack.

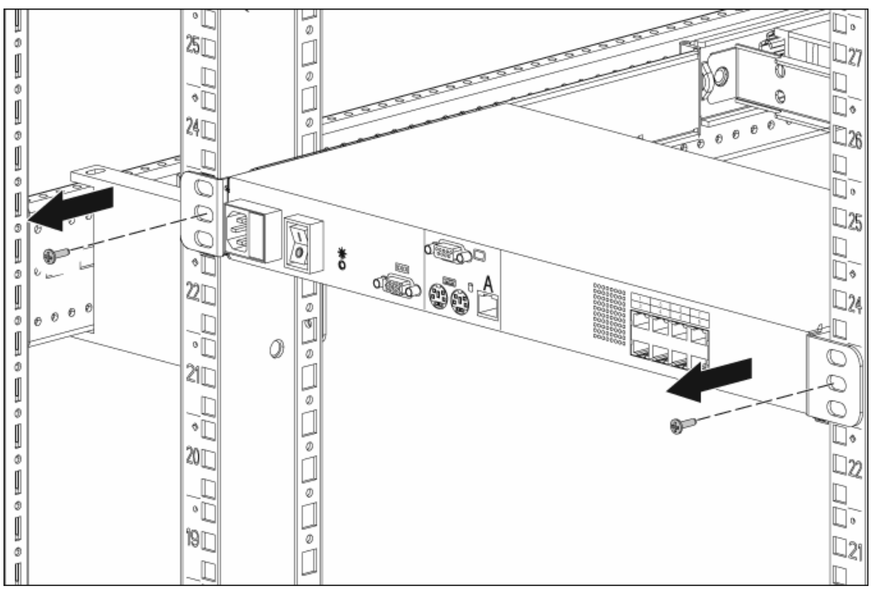


4. Remove the screws securing the side-mounting brackets to the console switch.

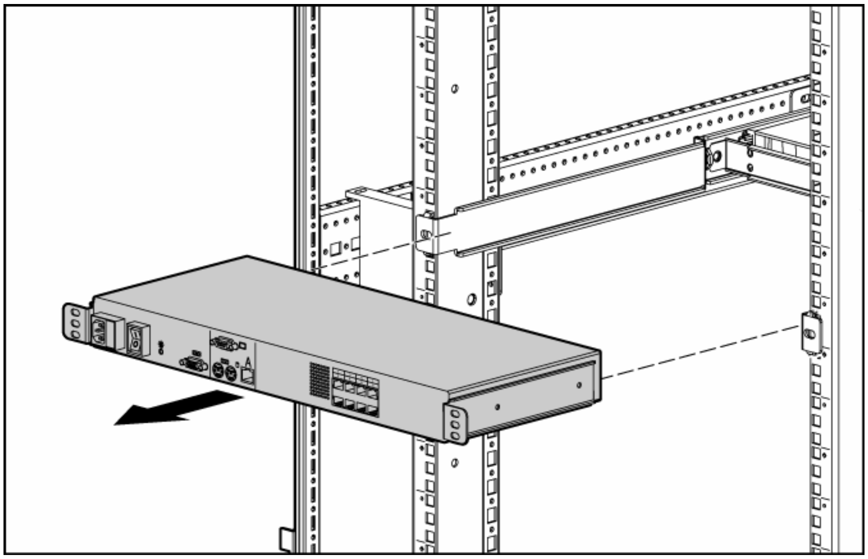


Removing the console switch standard-mount hardware

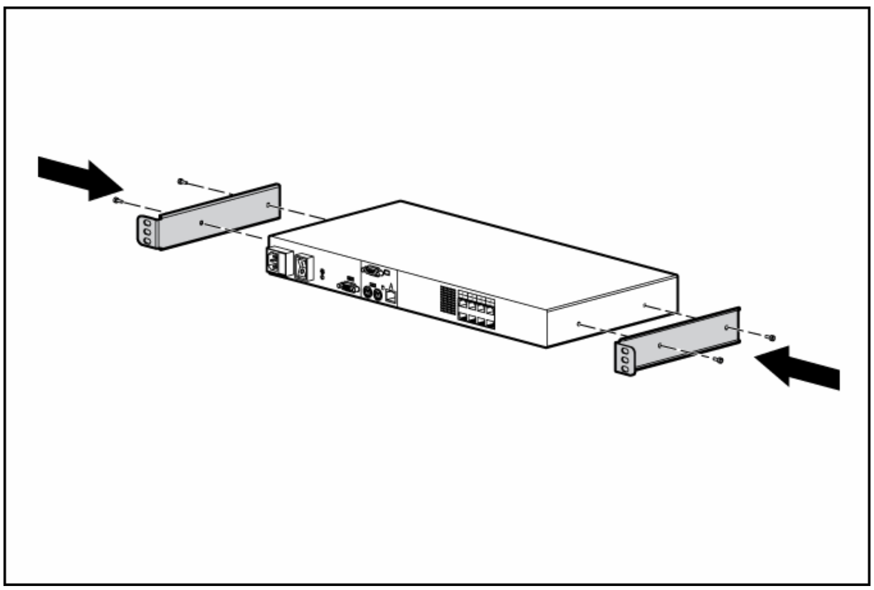
1. Remove the screws securing the console switch to the rail.



2. Slide the console switch out of the rack.

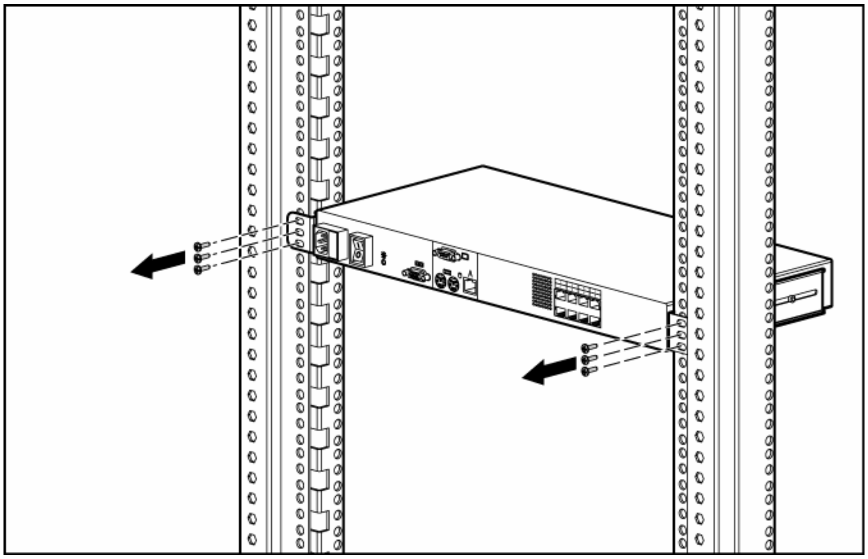


3. Remove the cage nuts, if necessary.
4. Remove the screws securing the 1U brackets to the console switch.

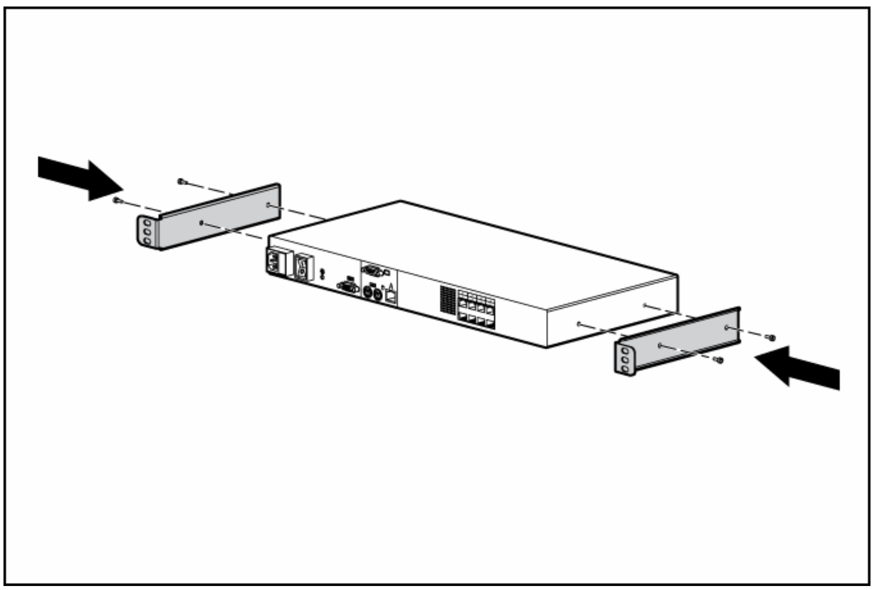


Removing the console switch cantilever-mount hardware

1. Remove the screws securing the console switch to the rail.



2. Remove the clip nuts or cage nuts, if necessary.
3. Remove the screws securing the 1U brackets to the console switch.

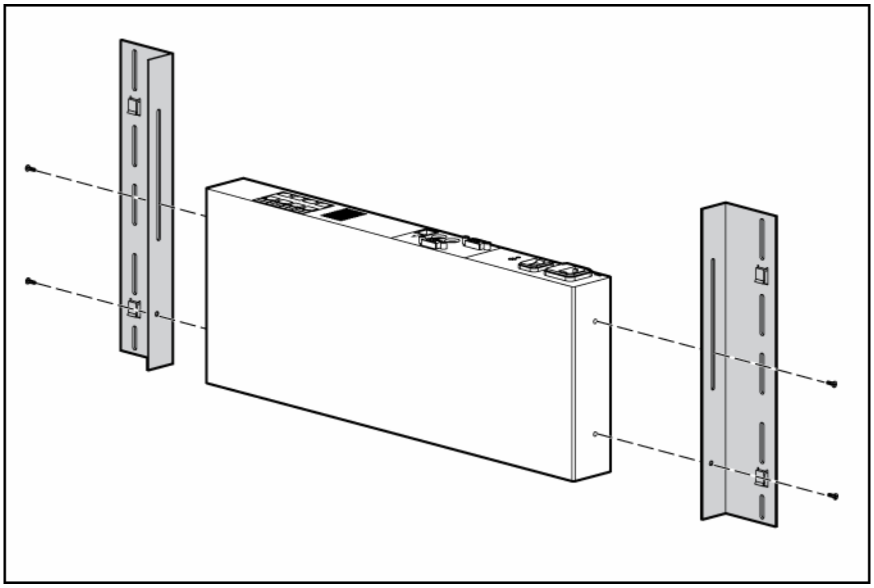


Replacing the console switch side-mount hardware

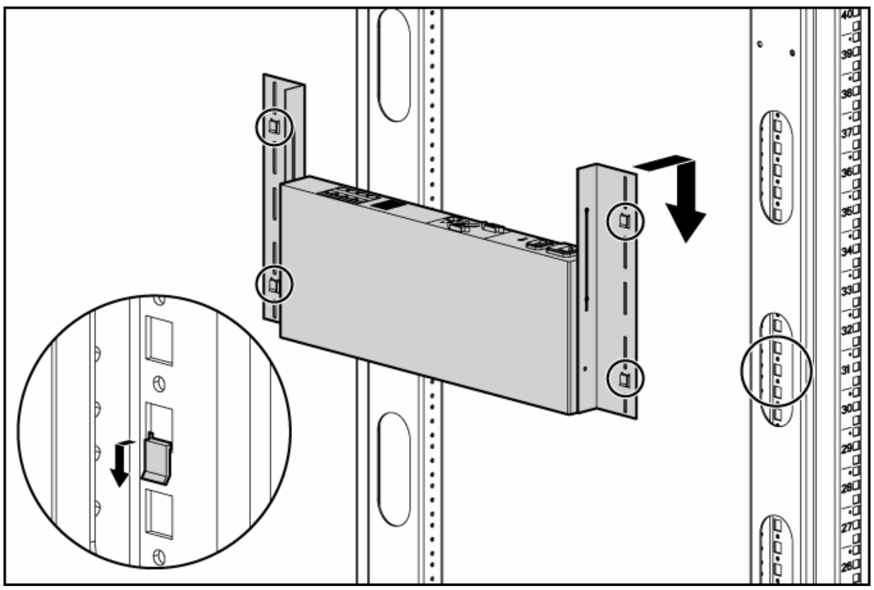
Type A—square- and round-hole rails

1. Remove the four screws, two on each side, from the console switch.

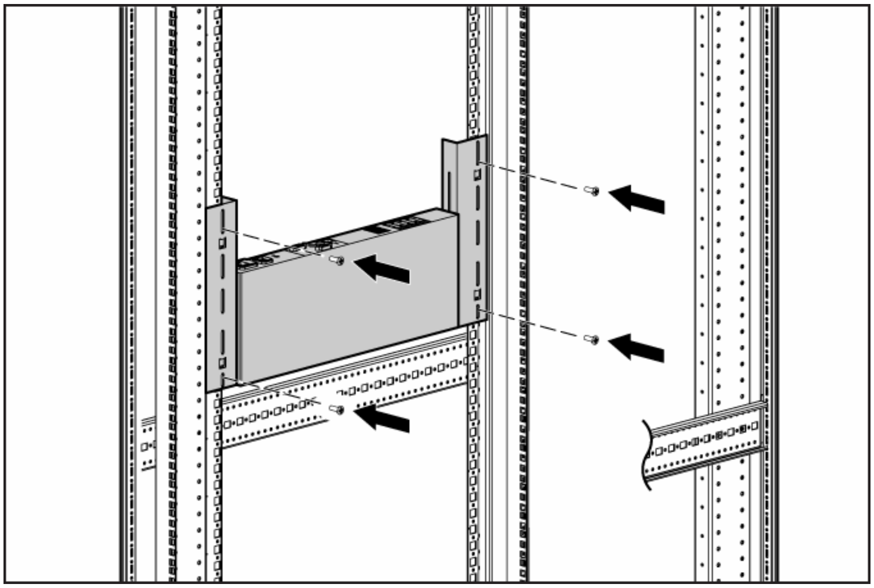
2. Attach the side-mounting brackets to the console switch using the four screws you removed.



3. Slide the side-mounting bracket tabs into the U locations on each side of the rack.

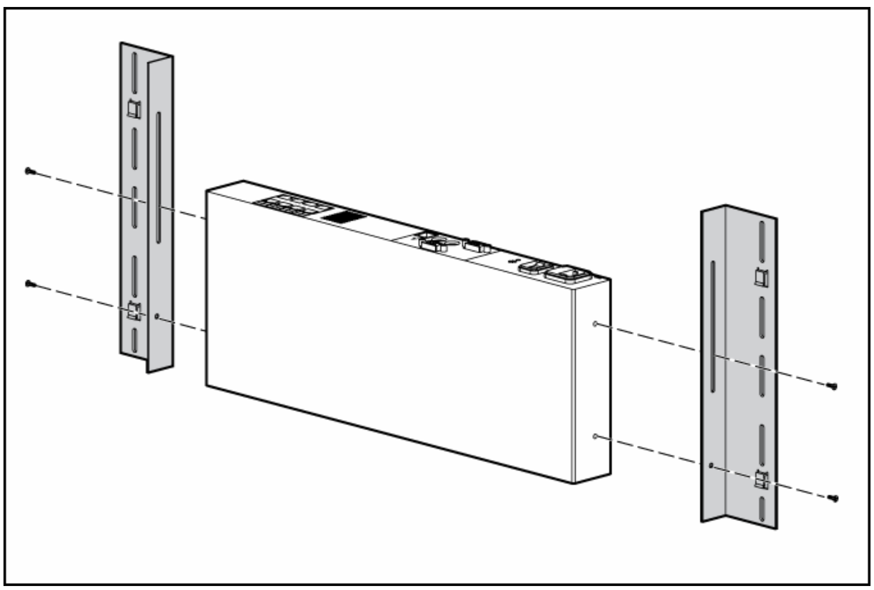


4. Secure the console switch to the rails using four self-tapping screws, two on each side.

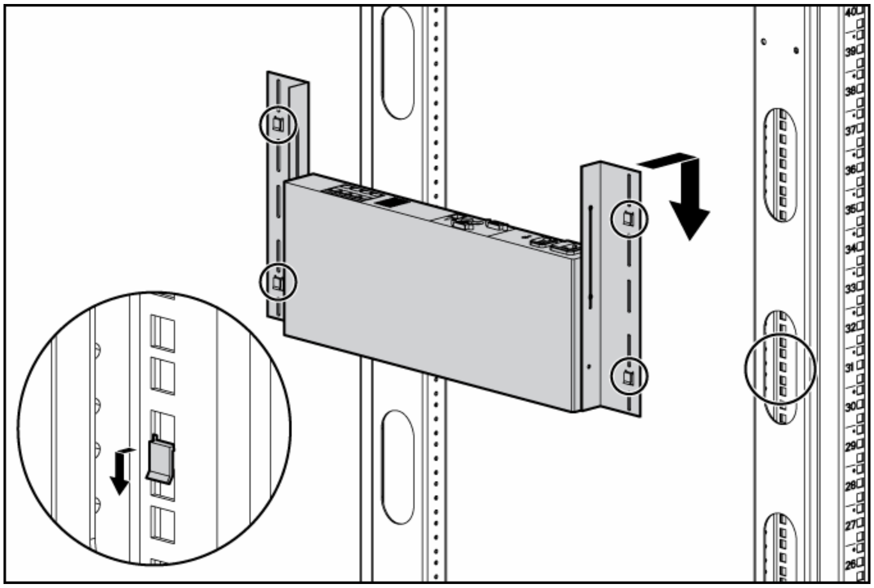


Type B—square-hole rails

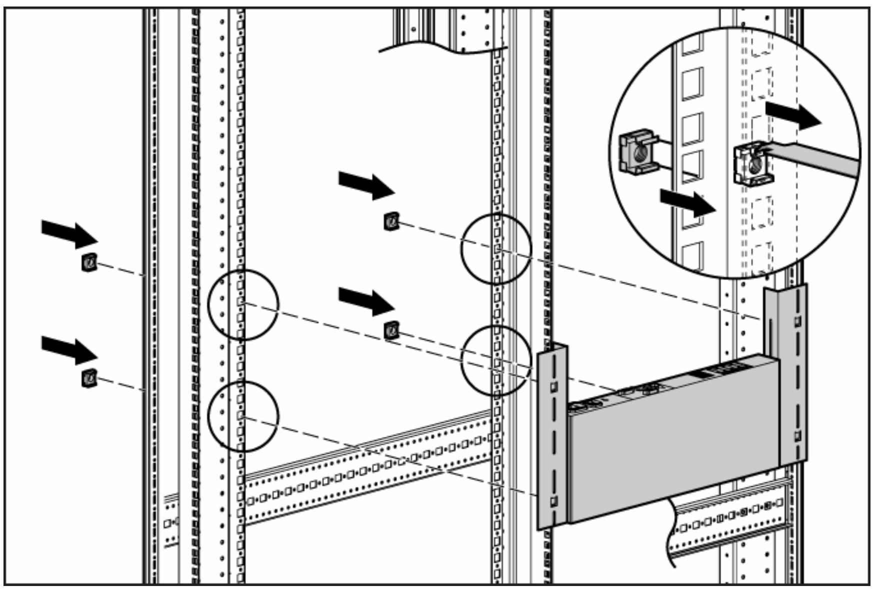
1. Remove the four screws, two on each side, from the console switch.
2. Attach the side-mounting brackets to the console switch using the four screws you removed.



3. Slide the side-mounting bracket tabs into the U locations on each side of the rack.



4. Install four cage nuts into the side-mounting bracket U locations.

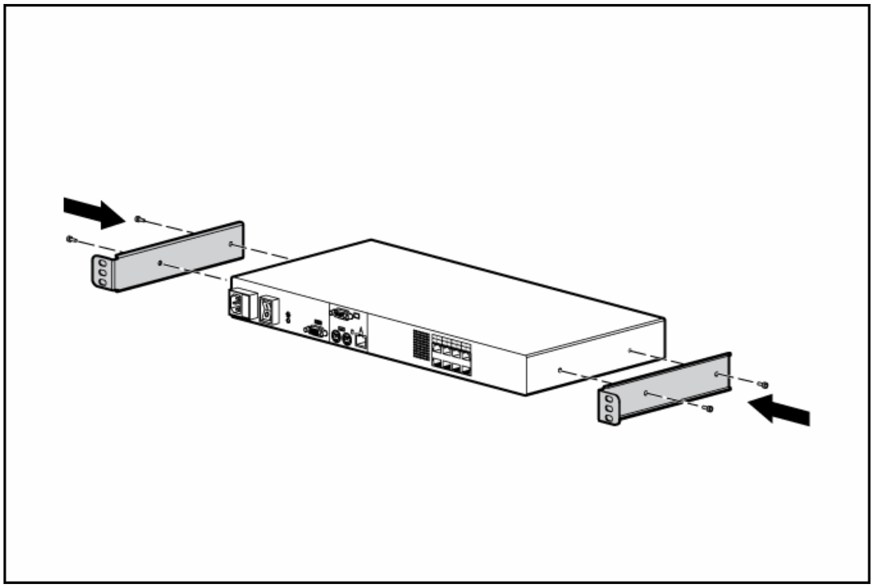


5. Secure the console switch to the rails, using four M-6 screws, two on each side.

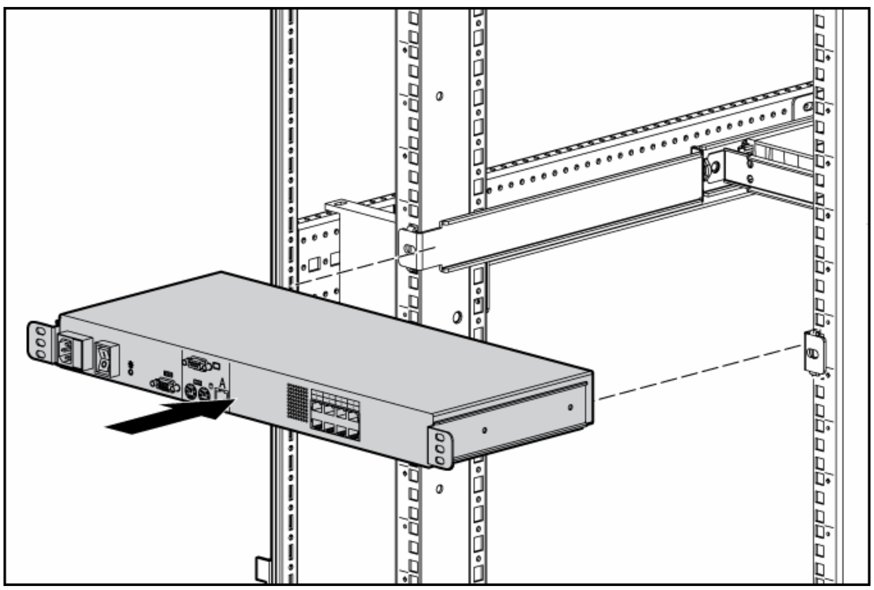
Replacing the console switch standard-mount hardware

1. Remove the four screws, two on each side, from the console switch.

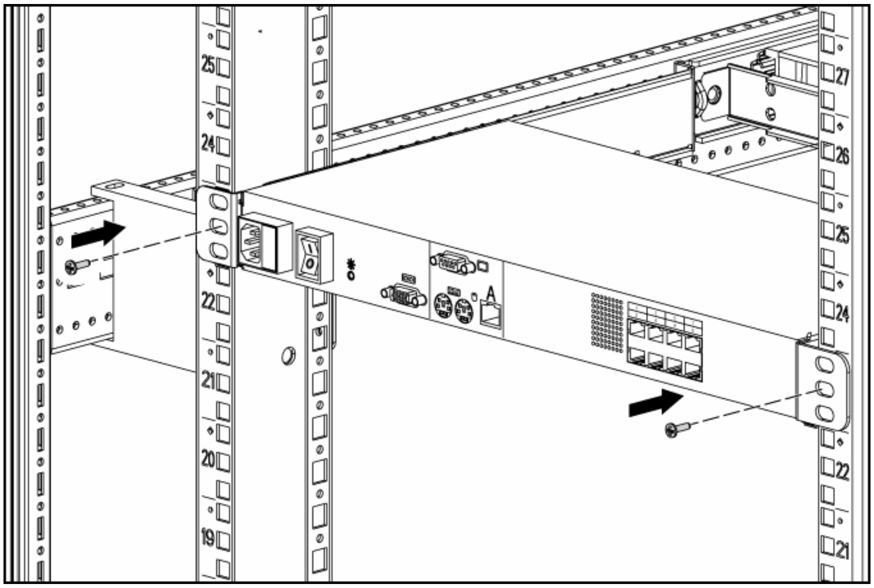
2. Attach the 1U brackets to the console switch using the four screws you removed.



3. Install a cage nut behind each rear rail if they have not already been installed.
4. Slide the console switch into the rear of the 1U product.



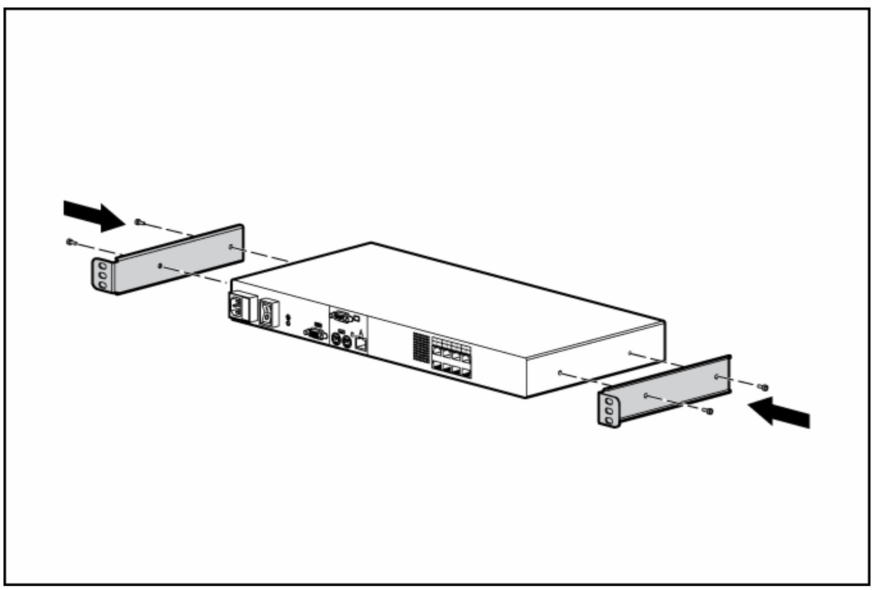
5. Secure the console switch to the rails using two M-6 screws, one on each side.



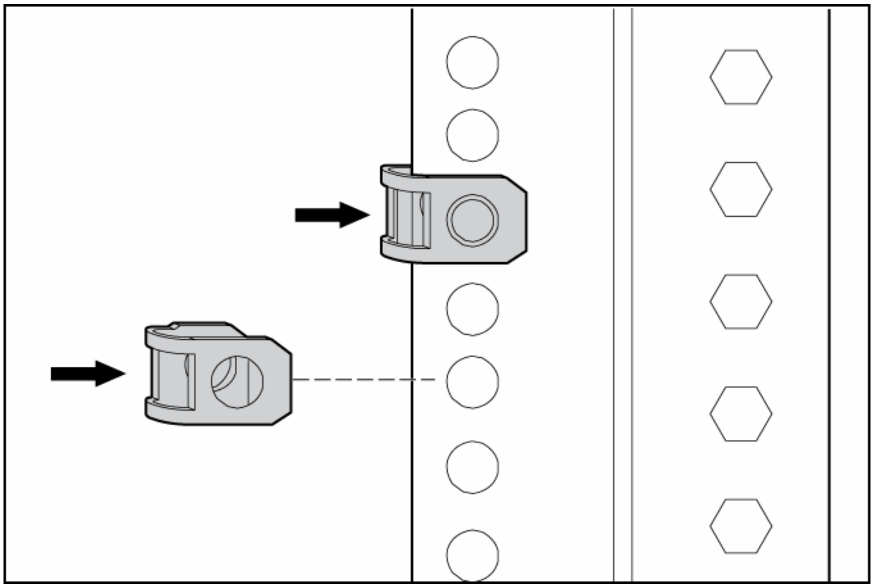
Replacing the console switch cantilever-mount hardware

Type A—round-hole rails

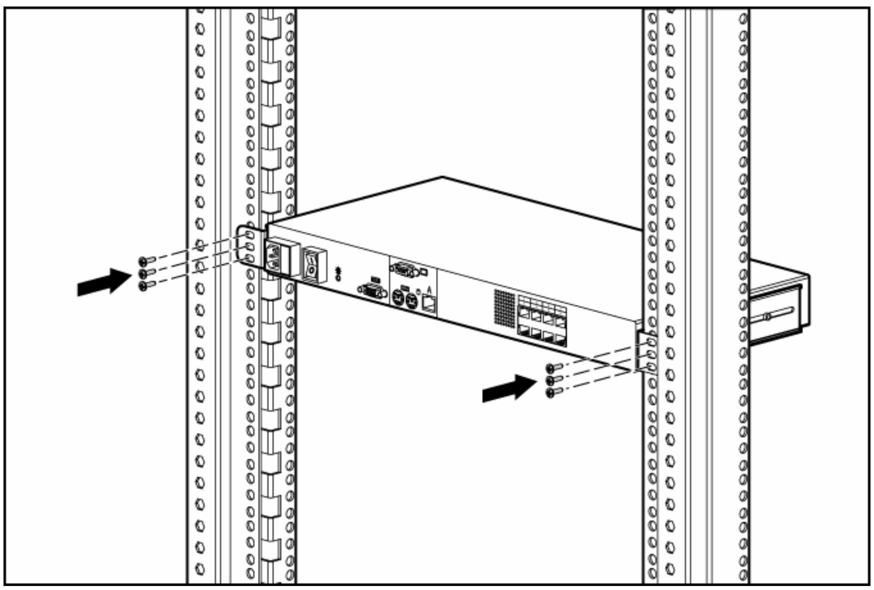
1. Remove the four screws, two on each side, from the console switch.
2. Attach the 1U brackets to the console switch using the four screws you removed.



3. Install up to six clip nuts.



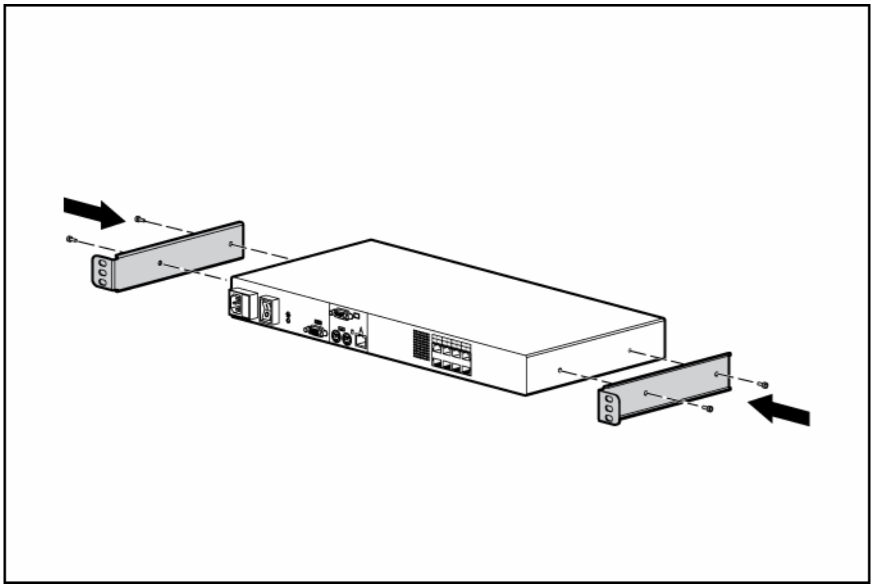
4. Secure the console switch to the rails, using the appropriate number of T-25 Torx screws.



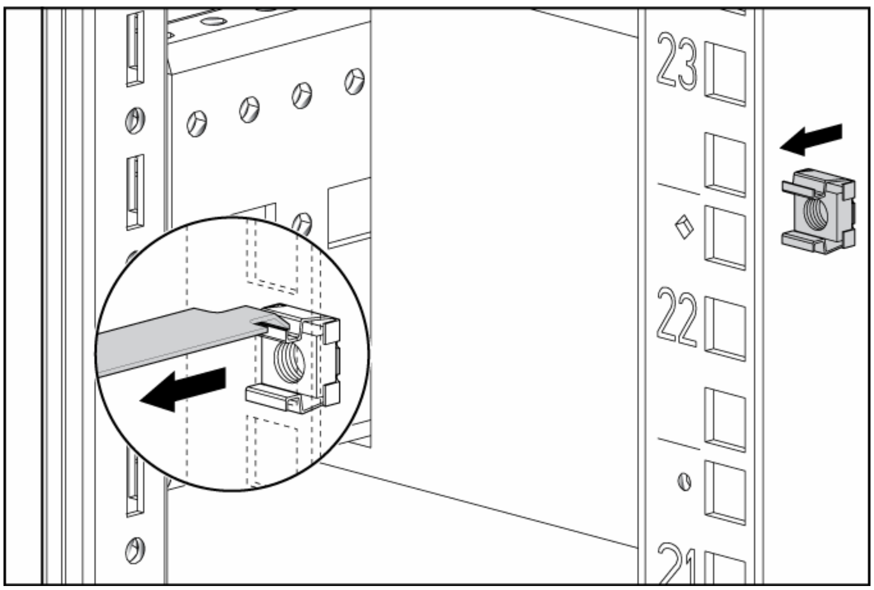
Type B—square-hole rails

1. Remove the four screws, two on each side, from the console switch.

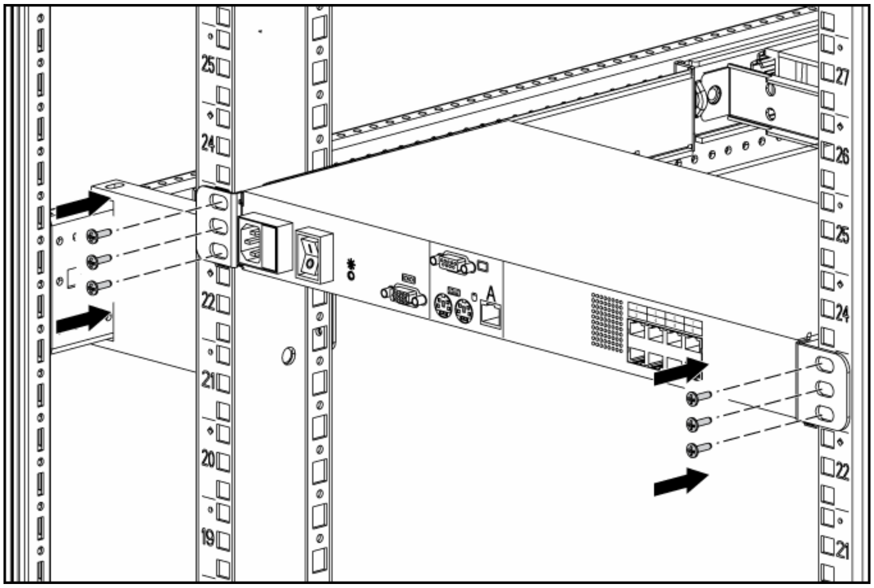
2. Attach the 1U brackets to the console switch using the four screws you removed.



3. Install up to six cage nuts.



4. Secure the console switch to the rails using the appropriate number of M-6 screws.



Removing the expansion module

1. Disconnect all cabling.

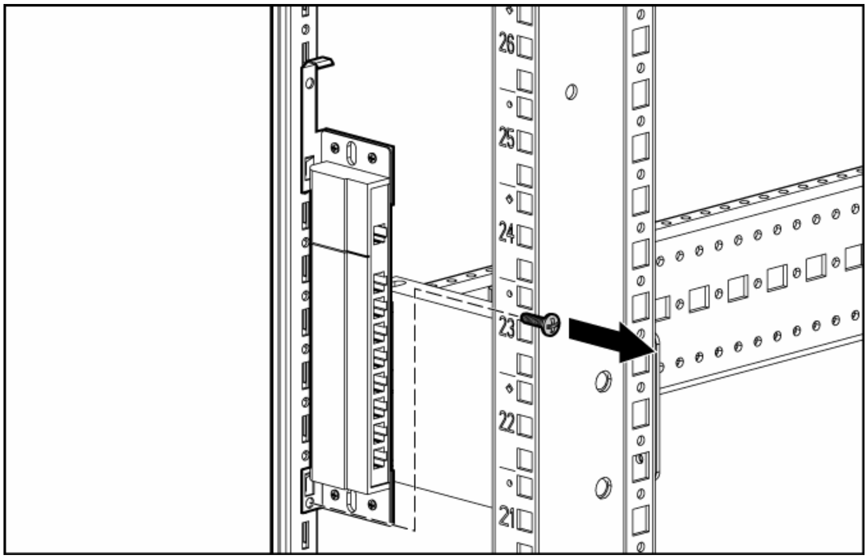
NOTE: Identification labels are provided on the UTP CAT5 cables to mark the ports to which they are connected.

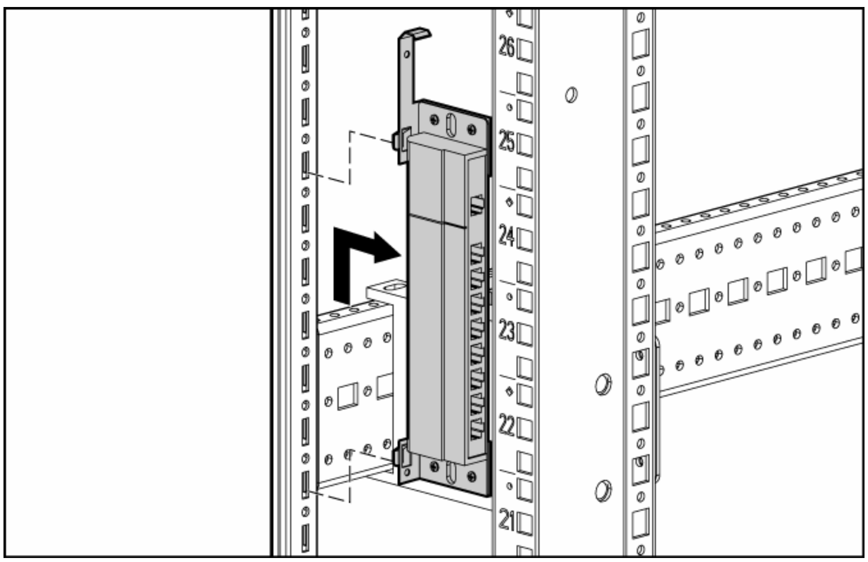
2. Remove the expansion module from the rack.

   If the expansion module was Velcro-mounted, pull the expansion module away from the rack.

   -or-

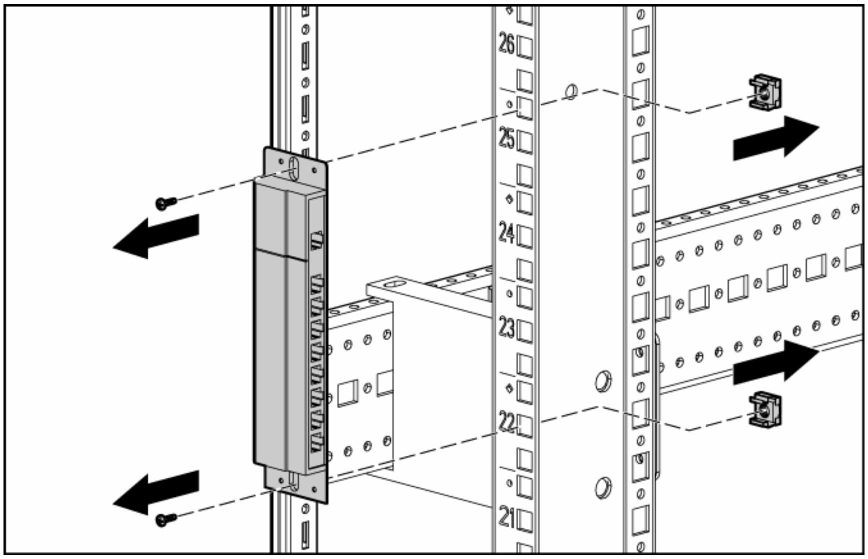
If the expansion module was side-mounted to the rack, remove the bottom screw and lift the expansion module away from the rack.





-or-

If the expansion module was rail-mounted, remove the two screws and cage nuts securing the expansion module to the internal rack rail.



Replacing the expansion module

1. Mount the expansion module into the rack.
2. Reconnect the cabling according to the identification labels provided on the UTP CAT5 cables.

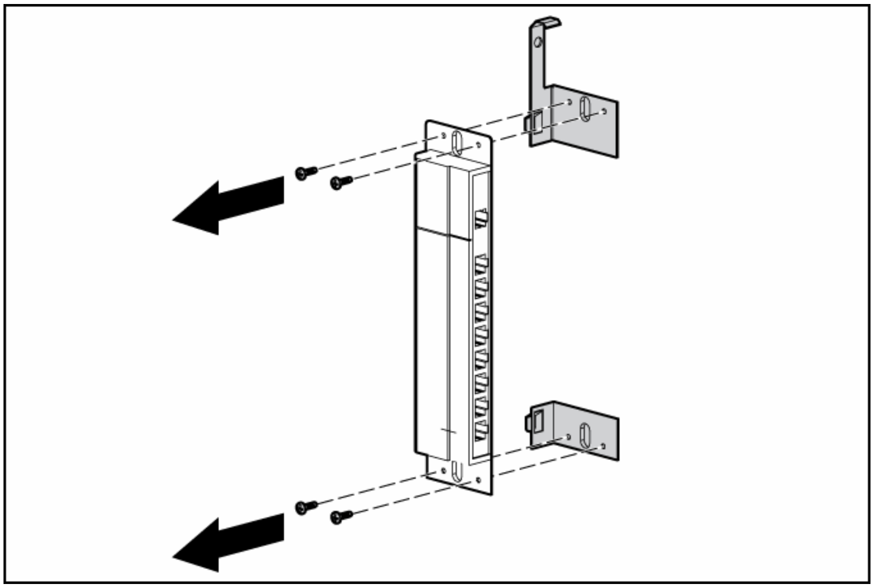
   -or-

   Locate up to nine UTP CAT5 cables.

   a. Connect a UTP CAT5 cable to the server connection port ("Components" on page 71) on the console switch.
   b. Connect the other end of that same UTP CAT5 cable to the IN port on the expansion module.
   c. Connect one end of another UTP CAT5 cable to the OUT port on the expansion module.
   d. Connect the other end of the second UTP CAT5 cable to the interface adapter.
   e. Repeat steps c and d to connect any other servers to this system.

Removing and replacing the expansion module hardware

Remove the screws securing the hardware to the expansion module.



To replace the component, reverse the removal procedure.

Removing the interface adapter

IMPORTANT: The cables on the PS/2 Interface Adapter have a locking mechanism to provide a secure cable connection. To properly disconnect the keyboard and mouse cables, grasp and slide the housing back to release the locking mechanism, and then remove the cable.

1. Disconnect the KVM or USB connectors on the interface adapter from the connections on the server.
2. Disconnect the UTP CAT5 cable connected to the interface adapter.
3. Remove the interface adapter.

Replacing the interface adapter

1. Connect a UTP CAT5 cable to the server connection port ("Components" on page 71) on the console switch.
2. Connect the other end of that same UTP CAT5 cable to the RJ-45 port on the interface adapter.
3. Connect the interface adapter to the appropriate ports on the server.
4. Repeat the preceding steps to connect any other servers to this system.
5. Update the interface adapter firmware ("Updating the interface adapter firmware" on page 60).

Troubleshooting

In this section

Troubleshooting sequence

If you cannot solve the customer's problem using this troubleshooting sequence or any of the following tools, escalate to the next level of support.

IMPORTANT: Do not authorize the return of a console switch until this section has been exhausted. Prior to requesting an RMA, perform all of the steps in this section.

Is the console switch operational?

1. Ask the customer to connect the KVM cables to the appropriate connectors ("Components" on page 71) on the rear panel of the console switch.
2. Power on the console switch.

   Does the activity indicator light ("Components" on page 71) on the rear panel of the console switch light up?

   If the activity indicator light is on, the console switch is operational.

   -or-

   If the activity indicator light is not on, ask the customer to be sure the power source is valid, the power button is on, and the cables are connected properly.
3. After the activity indicator light is on, which means the console switch is operational, ask the customer to press the **Prnt Scrn** key on the keyboard attached to the monitor that is connected to the console switch (local port). The Main menu appears and if no servers are connected, the screen is blank.

Has the customer verified the firmware version?

IMPORTANT: While updating the firmware, do not power off the console switch or attempt any operations.

1. Ask the customer to be sure that they have the latest console switch firmware version ("Displaying the console switch firmware version" on page 57) and interface adapter firmware version ("Displaying the interface adapter firmware version" on page 57).
2. Ask the customer to update the console switch firmware ("Updating the console switch firmware" on page 59), interface adapter firmware ("Updating the interface adapter firmware" on page 60), and cascaded console switch firmware ("Updating the cascaded console switch firmware" on page 59) if they do not have the latest versions installed.

Has the customer performed the Run Diagnostics feature?

1. Ask the customer to perform Run Diagnostics ("Running System Diagnostics" on page 56).

NOTE: In a cascaded configuration, the Run Diagnostics feature does not perform diagnostics on cascaded console switches. The Run Diagnostics feature must be performed locally on each console switch. To locally connect your cascaded console switch, refer to "How do I locally connect a cascaded console switch? (on page 52)."

2. Ask the customer if any of the test failed ("When the Run Diagnostics test fails" on page 48) and, if so, to take the necessary action.

Does the console switch detect a server connection?

1. Ask the customer to connect one of the RJ-45 ports ("Components" on page 71) on the rear panel of the console switch to a server with an UTP CAT5 cable and an interface adapter.
2. Ask the customer to power on the server and ask if the connection appears on the OSD. The connection should be "discovered" and reported by an EID, name, or port number.

Does the customer have the correct configurations?

1. Ask the customer to be sure that the console switch configurations ("Replacing the console switch" on page 28) are correct.
2. Ask the customer to be sure that the cascade configurations ("Cascading console switches" on page 62) are correct.
3. Ask the customer to be sure that the cascaded console switches are powered on.

IMPORTANT: While updating the firmware, do not power off the console switch or attempt any operations.

4. Ask the customer to be sure that the cascaded console switches ("Updating the cascaded console switch firmware" on page 59) and all attached interface adapters ("Updating the interface adapter firmware" on page 60) have updated firmware.

Are the cable connections correct?

1. Ask the customer to check all cable connections between the console switch, UTP CAT5 cables, interface adapters ("Replacing the interface adapter" on page 43), expansion modules ("Replacing the expansion module" on page 42), and servers.
2. Ask the customer if the interface adapter connectors are connected to the correct ports on the attached servers.
3. Ask the customer if the correct interface adapters are being used. Only HP interface adapters can be used with this product.
4. Ask the customer if a UTP CAT5 cable is connected from the RJ-45 port on the interface adapter to the appropriate server port ("Components" on page 71) on the rear panel of the console switch.
5. Ask the customer if the UTP CAT5 cables being used are the correct cable length ("Connection length table" on page 74).
6. Ask the customer if the standard UTP CAT5 cables supplied by HP are being used. The cables being used must be unshielded twisted pair, utilizing all four pairs of wires.
7. Ask the customer if an expansion module is being used, and if so to be sure that the console switch is connected to the IN port on the expansion module. The OUT ports on the expansion module should be connected to the attached servers by interface adapters.

Diagnosing the problem

This section covers the steps to quickly isolate a problem.

When the activity light indicator is not on

1. Ask the customer to be sure that the console switch is powered on and that the power source is valid.
2. Ask the customer to be sure that the cable connections are correct ("Are the cable connections correct?" on page 45).

When the console switch does not have the correct firmware

IMPORTANT: While updating the firmware, do not power off the console switch or attempt any operations.

1. Ask the customer to be sure that they have the latest console switch firmware version ("Displaying the console switch firmware version" on page 57) and interface adapter firmware version ("Displaying the interface adapter firmware version" on page 57).
2. Ask the customer to update the console switch firmware ("Updating the console switch firmware" on page 59), interface adapter firmware ("Updating the interface adapter firmware" on page 60), and cascaded console switch firmware ("Updating the cascaded console switch firmware" on page 59) if they do not have the latest versions installed.

When the console switch is not working properly

1. Determine whether the console switch is operational ("Is the console switch operational?" on page 44).
2. Determine if all the cable connections are correct ("Are the cable connections correct?" on page 45).

When the console switch hangs after being rebooted

1. Reboot the console switch again (turn the power off and back on again).
2. Perform the following powering-on sequence.
   a. Power on any cascaded console switches.
   b. Power on the console switch. The activity indicator light powers on.
   c. Power on the monitor.
   d. Power up the server.

When the cable connections are not correct

1. Ask the customer to check all cable connections between the console switch, UTP CAT5 cables, interface adapters ("Replacing the interface adapter" on page 43), expansion modules ("Replacing the expansion module" on page 42), and servers.
2. Ask the customer if the interface adapter connectors are connected to the correct ports on the attached servers.
3. Ask the customer if the correct interface adapters are being used. Only HP interface adapters can be used with this product.
4. Ask the customer if a UTP CAT5 cable is connected from the RJ-45 port on the interface adapter to the appropriate server port ("Components" on page 71) on the rear panel of the console switch.

5. Ask the customer if the UTP CAT5 cables being used are the correct cable length ("Connection length table" on page 74).
6. Ask the customer if the standard UTP CAT5 cables supplied by HP are being used. The cables being used must be unshielded twisted pair, utilizing all four pairs of wires.
7. Ask the customer if an expansion module is being used, and if so to be sure that the console switch is connected to the IN port on the expansion module. The OUT ports on the expansion module should be connected to the attached servers by interface adapters.

When the cascaded console switch configurations are not correct

1. Ask the customer to be sure that the console switch configurations ("Replacing the console switch" on page 28) are correct.
2. Ask the customer to be sure that the cascade configurations ("Cascading console switches" on page 62) are correct.
3. Ask the customer to be sure that the cascaded console switches are powered on.

IMPORTANT: While updating the firmware, do not power off the console switch or attempt any operations.

4. Ask the customer to be sure that the cascaded console switches ("Updating the cascaded console switch firmware" on page 59) and all attached interface adapters ("Updating the interface adapter firmware" on page 60) have updated firmware.

When the console switch password is lost

Ultimate responsibility for data security must be enforced by the customer. If the customer sets and subsequently loses a password, escalate to EPR (the highest level of escalation).

When the expansion module is not being recognized by a Compaq Server Console Switch

Ask the customer if an expansion module ("Replacing the expansion module" on page 42) is being used in combination with a cascaded Compaq Server Console Switch. An expansion module is considered a level of cascading ("Cascading console switches" on page 62) and therefore cannot be used in combination with a Compaq Server Console Switch.

When the local user cannot activate or view the OSD and the OSD flag disappears

Ask the customer to be sure that the local keyboard is connected properly and that the keyboard is valid.

When the local user cannot view the OSD copyright notice

1. Ask the customer to be sure that the power source is valid.
2. Ask the customer to be sure that the cable connections are correct ("Are the cable connections correct?" on page 45).
3. Ask the customer to be sure that the monitor is valid.

When the local user cannot view the OSD flag

Ask the customer to preview the preferences selected in the OSD to determine if the local port display has been disabled or set to time out. If the preferences are set not to display the OSD flag or to have the flag time out, then the OSD flag does not display.

When the OSD is distorted or not readable

Ask the customer to be sure that the monitor to which the target server is set to supports the refresh rate.

When the OSD is inaccessible

Ask the customer to press the **Ctrl** key twice.

When the Run Diagnostics test fails

IMPORTANT: While updating the firmware, do not power off the console switch or attempt any operations.

1. Update the console switch firmware ("Updating the console switch firmware" on page 59).
2. Update the interface adapter firmware ("Updating the interface adapter firmware" on page 60).

When the servers are still listed although they have been disconnected

Ask the customer to perform the Run Diagnostics ("Running System Diagnostics" on page 56) function, from the Diagnostics dialog box, and click **Clear.**

When the screen saver does not turn on

Ask the customer to be sure to click **OK** to confirm the screen saver selection. Click **X** or press the **Esc** key to cancel the command.

When the system does not recognize the HP IP Console Switch

IMPORTANT: While updating the firmware, do not power off the console switch or attempt any operations.

Ask the customer to be sure that all of the console switches are updated with the latest firmware.

When the system does not recognize the cascaded console switches

IMPORTANT: While updating the firmware, do not power off the console switch or attempt any operations.

Ask the customer to be sure that all of the console switches are updated with the latest firmware.

When the video displays all green or red

1. Ask the customer to check the UTP CAT5 cable for breaks or bad crimps.
2. Ask the customer to check the VGA connection for bent pins.

When the video resolution is distorted

Ask the customer to refer to the connection length table (on page 74).

Frequently asked questions

In this section

Are the expansion module ports hot-pluggable?

Yes.

Are the interface adapters hot-pluggable?

Yes.

Are the keyboard, monitor, and mouse connections on the console switch hot-pluggable?

Yes.

Are the server connections on the console switch hot-pluggable?

Yes.

Can the console switch be mounted in a round-hole rack?

Yes, the console switch can be mounted in a round-hole rack using the standard-mount installation ("Replacing the console switch standard-mount hardware" on page 35).

Can the console switch be side-mounted in a round-hole rack?

No.

Do you have to power down a server to replace an interface adapter?

No.

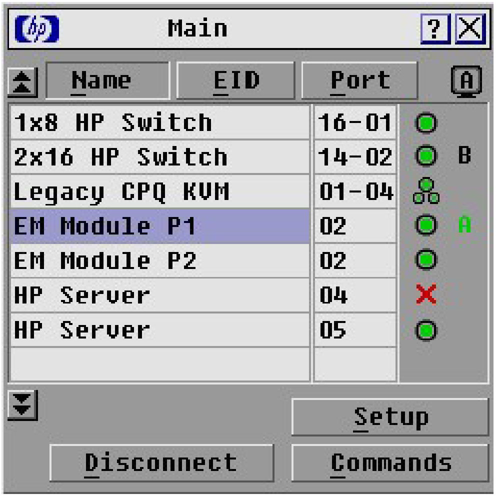
Does the console switch support HP legacy console switches?

No. The console switch supports specific console switch models ("Compatible console switch models" on page 62).

How do I access the Main dialog box?

Press the **Print Scrn** key. The Main dialog box appears.

NOTE: You can also press the **Ctrl** key twice within one second to launch the OSD. You can use this key sequence in any place you see Print Scrn.



How do I cascade console switches?

Refer to "Cascading console switches (on page 62)."

How do I change the keyboard language?

Language-specific keyboard emulation in the interface adapter ("Replacing the interface adapter" on page 43) is determined by the language chosen on the OSD.

How do I know which port my cascaded console switch is connected to?

Refer to "Viewing and selecting ports and servers ("Viewing the Port column" on page 69, "Viewing the Server Status column" on page 70)."

How do I locally connect a cascaded console switch?

1. Power off the cascaded console switch.
2. Power off the main console switch.
3. Disconnect the local KVM cables from the main console switch.
4. Connect the local port KVM cables to the cascaded console switch.
5. Power on the cascaded switch.

How do I look at my console switch firmware version?

Refer to "Displaying the console switch firmware version (on page 57)."

How do I look at my interface adapter firmware version?

Refer to "Displaying the interface adapter firmware version (on page 57)."

How do I turn the screen saver off?

1. From the Security dialog box, deselect **Enable Screen Saver.**
2. Click **OK** to save settings.

To immediately activate the screen saver, press the **Print Scrn** key, and then press the **Pause** key. This command only works when the user is connected to a server.

How do I use the Run Diagnostics feature?

Refer to "Running System Diagnostics (on page 56)."

Is the console switch compatible with ILO and RILOE?

Yes.

Is the serial download port hot-pluggable?

No. If the serial download cable is disconnected from the serial download connector ("Components" on page 71) before the download is complete, the console switch must be rebooted with the serial download cable connected.

What are the minimum and maximum cable lengths?

Refer to "Connection length table (on page 74)."

What is the port marked with an A on the console switch used for?

This port is used specifically for cascading another console switch below a console switch.

What kind of CAT5 cables are supported?

Only UTP CAT5, CAT6, and CAT7 cables are supported.

Where can I get more information?

For more information, refer to the HP website (http://h18004.www1.hp.com/products/servers/proliantstorage/rack-options/scs/index-kvm.html).

Why can remote HP IP Console Switch users not access servers attached to a cascaded HP KVM Server Console Switch?

In order for remote HP IP Console Switch users to access servers attached to a cascaded HP KVM Server Console Switch, the HP KVM Server Console Switch must be in Free Mode or have the screen saver enabled.

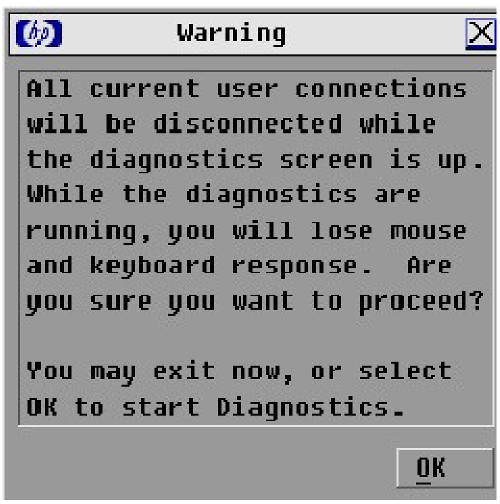
To enable Free Mode on the HP KVM Server Console Switch, press the **Print Scrn** key, the **Alt + 0** keys, or click **Disconnect** in the Main dialog box. No server is selected, and the status flag displays Free. (This situation only applies to the **0** on the keyboard, not the keypad.)

Diagnostic tools

In this section

Activating Run Diagnostics

1. From the Main dialog box, click **Commands>Run Diagnostics.** A warning message is displayed indicating that all users will be disconnected.



2. Click **OK** to begin. All users are disconnected, and the Diagnostics dialog box is displayed.

   -or-

   Click **X** or press the **Esc** key to exit the dialog box without running a diagnostic test.



3. As each test is finished, a pass or fail symbol is displayed.

A passed test is indicated with a green circle, and a failed test is indicated by a red X. The test is complete when the last test symbol displays.

4. (Optional) If you have any offline interface adapters, you can click **Clear** to remove them from the list.
5. (Optional) If you have any suspect interface adapters, you can click **Display.** The Suspect interface adapter dialog box is displayed.

Running System Diagnostics

Clicking **Run Diagnostics** ("Activating Run Diagnostics" on page 55) runs a command to check the main board functions subsystems (memory, intra-board communications, console switch control, and the video channels) for each system controller.

Test	Description
Memory Test	Reports the condition of the main board RAM. This indicator displays the results of the memory tests performed at system reboot.
Firmware CRCs	Validates the current firmware images stored in the system FLASH by comparing a CRC value on each image and comparing those results to the expected values.
Comm Interfaces	Verifies the intra-board communication subsystems are accessible and functional by querying the communications controller and performing basic register level tests.
Switch Controller	Verifies the switch matrix controller is accessible and functional by querying the switch matrix controller and performing basic register level tests.
Local Video	Verifies that all the video channel subsystems are accessible, functional, and performing basic register level tests.
Online IAs	Indicates the total number of currently connected and powered interface adapters.
Offline IAs	Indicates the number of interface adapters that have been connected successfully in the past and are powered down.
Suspect IAs	Indicates the number of interface adapters that have been detected but are either unavailable for connection or have dropped packets during the ping tests.

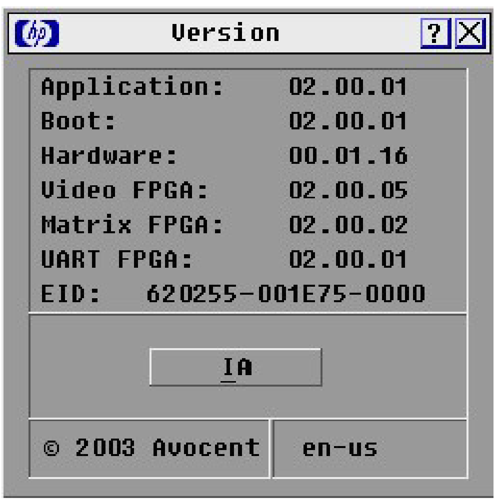
Displaying the firmware version

In this section

Displaying the console switch firmware version

NOTE: Provide the application version number when communicating with HP customer service centers.

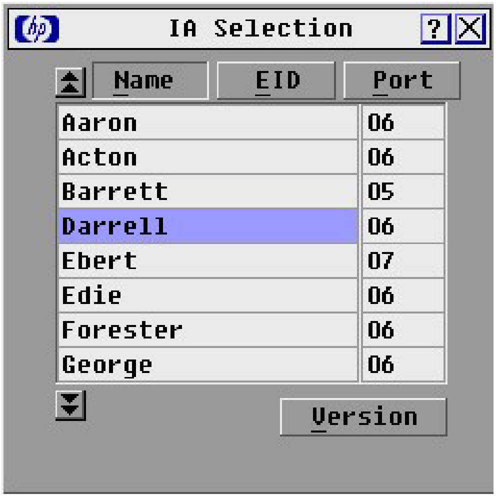
1. Connect to the local port.
2. Press the **Prnt Scrn** key to access the OSD. Enter a password if one is required. The Main dialog box is displayed.
3. Click **Commands>Version.** The Version dialog box is displayed. The top half of the box lists the subsystem versions in the console switch.



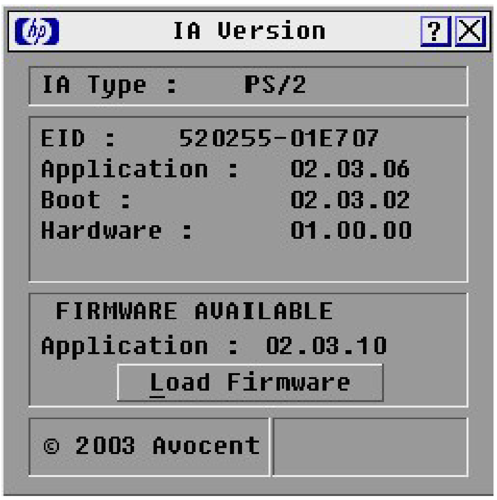
Displaying the interface adapter firmware version

1. Connect to the local port.
2. Press the **Prnt Scrn** key to access the OSD. Enter a password if one is required. The Main dialog is displayed.
3. Click **Commands>Version.** The Version dialog box is displayed.

4. Click **IA** to access the IA Selection dialog box to view individual interface adapter cable version information. The IA Selection dialog box is displayed.



5. To view the selected interface adapter cable, click **Version.** The IA Version dialog box is displayed.



6. Click **X** to exit.

Updating the firmware

In this section

Updating the console switch firmware

NOTE: The PC or laptop used to upgrade the firmware must be running Microsoft® Windows NT®.

1. Connect the serial download cable to the serial download connector on the PC (must be running Windows®) and to the serial download connector ("Components" on page 71) on the rear panel of the console switch.
2. Go to the folder where the firmware files are saved and run the WUpDateHP.exe file.

NOTE: The three .bin files must be in the same folder as the WUpDateHP.exe file.

3. Select which language to install and enter the serial port number of the server to which the console switch is attached.
4. Click **Load.** The update process begins.

   The update process has three updates—Loading Application Firmware, Loading Graphics Chip, and Loading System Data. You see a progress bar for each of those three updates. The firmware update is not done until all of the updates have been loaded. When the firmware is updated, the following message indicating "Update Complete" is displayed.
5. Click **Done.**

Updating the cascaded console switch firmware

NOTE: The PC or laptop used to upgrade the firmware must be running Microsoft® Windows NT®.

1. Locally connect the cascaded console switch ("How do I locally connect a cascaded console switch?" on page 52).
2. Update the cascaded console switch firmware.
   a. Connect the serial download cable to the serial download connector on the PC (must be running Windows®) and to the serial download connector ("Components" on page 71) on the rear panel of the main console switch.
   b. Go to the folder where the firmware files are saved and run the WUpDateHP.exe file.

NOTE: The three .bin files must be in the same folder as the WUpDateHP.exe file.

   c. Select which language to install and enter the serial port number of the server to which the main console switch is attached.
   d. Click **Load.** The update process begins.

The update process has three updates—Loading Application Firmware, Loading Graphics Chip, and Loading System Data. You see a progress bar for each of those three updates. The firmware update is not done until all of the updates have been loaded. When the firmware is updated, the following message indicating "Update Complete" is displayed.

e. Click **Done.**

3. Update the attached interface adapter firmware ("Updating the interface adapter firmware" on page 60).
4. Power off the cascaded console switch.
5. Disconnect the local KVM cables from the cascaded console switch.
6. Connect the local port KVM cables to the main console switch.
7. Power on the main console switch.
8. Power on the cascaded console switch.

Updating the interface adapter firmware

There are two ways to update the interface adapter firmware, simultaneously ("Updating the interface adapter firmware simultaneously" on page 60) and individually ("Updating the interface adapter firmware individually" on page 60). The servers attached to the interface adapters must be powered on while updating the firmware.

Updating the interface adapter firmware simultaneously

1. From the Main dialog box, click **Commands>IA Status.** The IA Status dialog box is displayed.
2. Select **PS/2** or **USB,** then click **Upgrade.** The IA Upgrade dialog box is displayed.



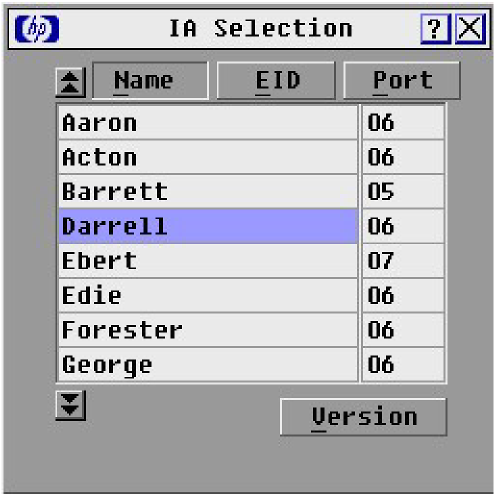
3. Click **OK** to save settings.
4. Press the **Esc** key to return to the Main dialog box. The OSD indicators are displayed as yellow while the upgrade is in progress. The indicators change to red and then to green when the upgrade is complete.

NOTE: Wait until the OSD indicators are displayed as green before continuing.

Updating the interface adapter firmware individually

1. From the Main dialog box, click **Commands>Version.** The Version dialog box is displayed.

2. Click **IA.** The IA Selection dialog box is displayed.



3. Select the individual interface adapter, and click **Version.** The IA Version dialog box is displayed.
4. Click **Load Firmware.**

Cascading console switches

In this section

Compatible console switch models

Review the following information before cascading console switches with this product.

This product supports only one level of cascading. An expansion module is considered a level of cascading and therefore cannot be used in combination with cascaded console switches.

To ensure optimum equipment performance while cascading console switches, follow the proper powering-on sequence—power on the console switches, monitor, and then servers.

△ **CAUTION:** Do not use interface adapters to cascade console switches with console switches. If interface adapters are used to cascade these products, undesirable operations might occur.

NOTE: The console switch does not support Compaq KVM PCI Cards or HP legacy console switches.

NOTE: To perform a firmware upgrade for a cascaded console switch and all attached interface adapters, you must locally connect the keyboard, monitor, and mouse to the cascaded console switch to access the local OSD.

Compaq Server Console Switch

△ **CAUTION:** While cascading a 2 x 8 Compaq Server Console Switch, connect only one Interface Adapter at any given time. Undesirable operations might occur if multiple Interface Adapters are attached.

△ **CAUTION:** While cascading console switches, be sure that the Compaq Server Console Switch is cascaded below the console switch. Undesirable operations might occur if these specific cascading sequences are not followed.

The following Compaq Server Console Switches can be integrated into the console switch system. Compatible Compaq Server Console Switch models include:

- 1 x 4 [PN: 400336 (-001)(-291)(B-31)]
- 1 x 8 [PN: 400337 (-001)(-291)(B-31)]
- 2 x 8 [PN: 400338 (-001)(-291)(B-31)]
- 2 x 8 48 VDC [PN: 400542 B-21]

All Compaq Server Console Switches must be upgraded with SoftPaq firmware, version 2.1.1. from the Softpaq SP21898 directory or later, when cascaded with this product.

HP IP Console Switch

⚠ **CAUTION:** Do not use interface adapters to cascade HP IP Console Switches with console switches. If interface adapters are used to cascade these products, undesirable operations might occur.

⚠ **CAUTION:** While cascading console switches, be sure that the console switch is cascaded below the HP IP Console Switch. Undesirable operations might occur if these specific cascading sequences are not followed.

The following HP IP Console Switches can be integrated into the console switch system. Compatible HP IP Console Switch models include:

- 1 x 1 x 16 [PN: 262585 (B-21)]
- 3 x 1 x 16 [PN: 262586 (B-21)]

All HP IP Console Switches must be upgraded with SoftPaq firmware, version 2.1.1 or later, when cascaded with this product.

Cascading an HP KVM Server Console Switch with another HP KVM Server Console Switch

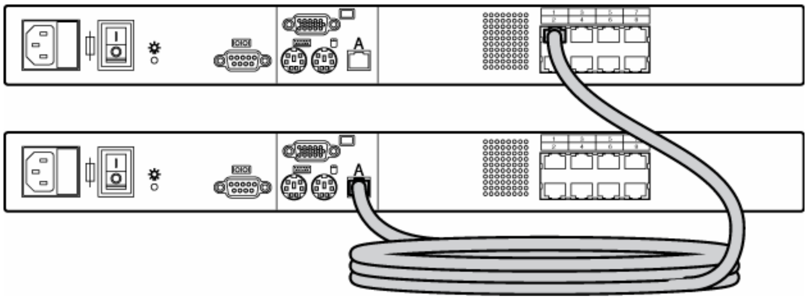
NOTE: To perform a firmware upgrade for a cascaded console switch and all attached interface adapters, you must locally connect the keyboard, monitor, and mouse to the cascaded console switch to access the local OSD.

1. Mount the console switches in the rack.
2. Locate a UTP CAT5 cable and connect one end to the server connection port ("Components" on page 71) on the cascaded console switch.
3. Connect the other end of that same UTP CAT5 cable to the RJ-45 port on the interface adapter.
4. Connect the interface adapter to the appropriate ports on the server.
5. Repeat steps 1 through 3 for any other servers to be added to this system.
6. Connect the local port KVM cable to the cascaded console switch.
7. Power on the cascaded console switch.
8. Power on the monitor.
9. Power up the server.
10. Update the cascaded console switch firmware.
11. Update all interface adapter firmware ("Updating the interface adapter firmware" on page 60).
12. Power off the cascaded console switch.
13. Power off the monitor.
14. Disconnect the local KVM cables from the cascaded console switch.
15. Connect the local port KVM cable to the main console switch.
16. Connect a UTP CAT5 cable to the server connection port ("Components" on page 71) on the main console switch.
17. Connect the other end of that same UTP CAT5 cable to the RJ-45 interface port ("Components" on page 71) on the cascaded console switch.
18. Repeat steps 15 and 16 for any other console switches to be added to this system.
19. Power on the console switches.
20. Power on the monitor.
21. Update the main console switch firmware.

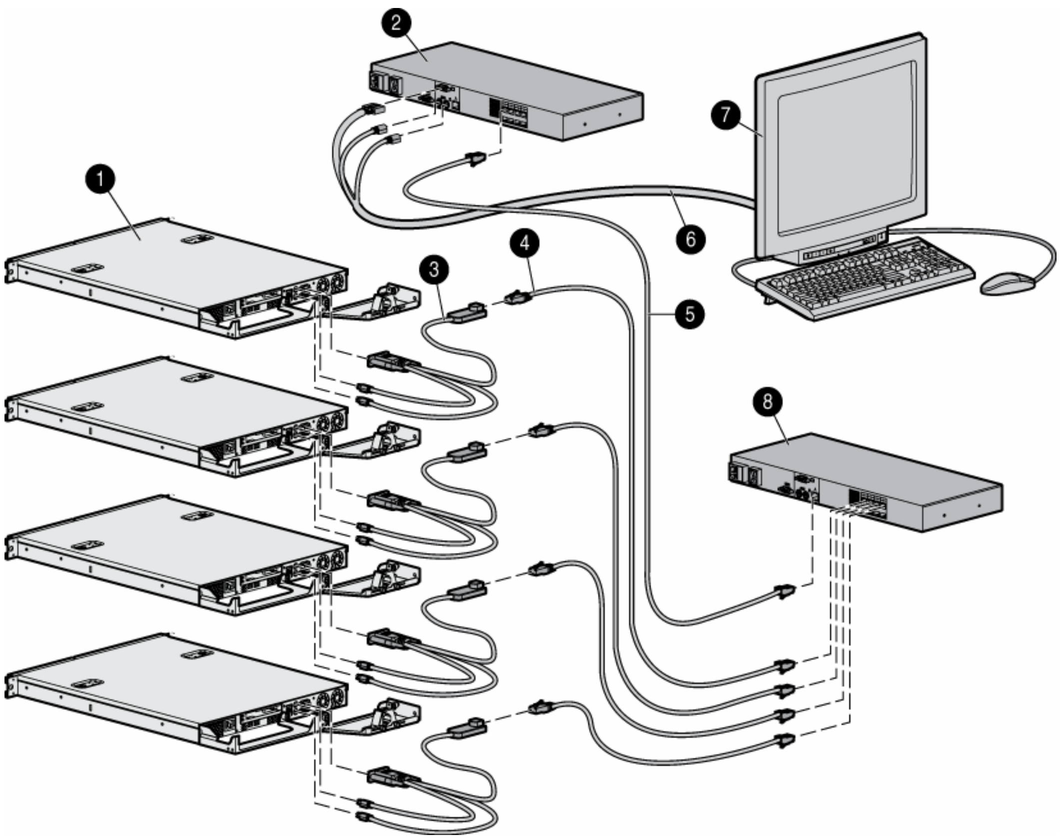
22. Update all interface adapter firmware ("Updating the interface adapter firmware" on page 60).

The following figure shows an HP KVM Server Console Switch cascaded to another HP KVM Server Console Switch. The top console switch is the main console switch, while the bottom console switch is the cascaded console switch.

△ **CAUTION:** Do not use interface adapters to cascade console switches with console switches. If interface adapters are used to cascade these products, undesirable operations might occur.



Example of an HP KVM Server Console Switch cascade configuration



Item	Description
1	Server
2	Main console switch
3	PS/2 Interface Adapter or USB Interface Adapter*
4	UTP CAT5 cable
5	UTP CAT5 cable

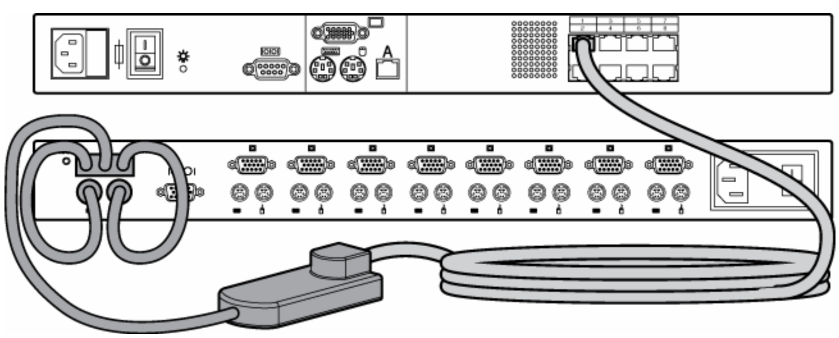
Item	Description
6	KVM cable
7	Local port
8	Cascaded console switch

* not shown

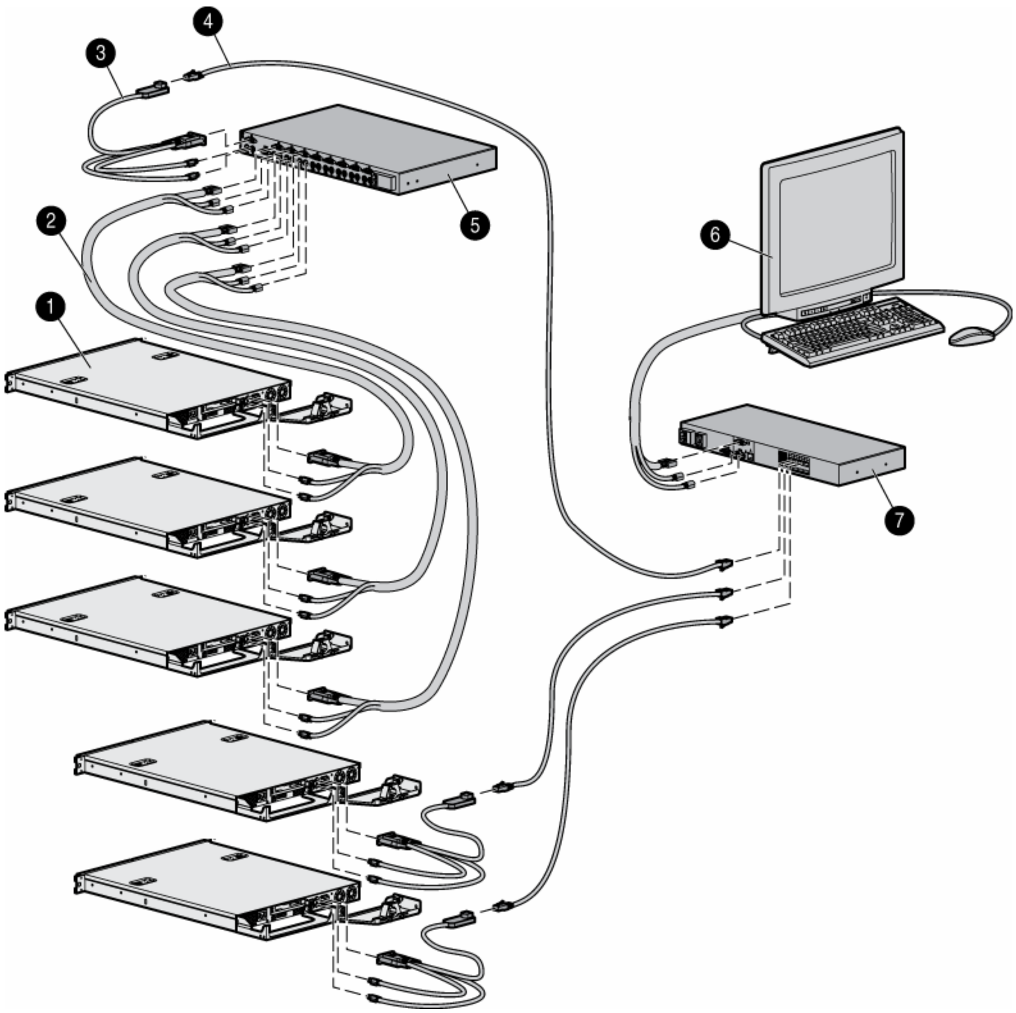
Cascading a Compaq Server Console Switch with an HP KVM Server Console Switch

1. Mount the console switches in the rack.
2. Connect the local port KVM cable to the console switch.
3. Connect a UTP CAT5 cable to the server connection port ("Components" on page 71) on the console switch.
4. Connect the other end of that same UTP CAT5 cable to the RJ-45 port on the interface adapter.
5. Connect the interface adapter to the appropriate ports on the Compaq Server Console Switch.
6. Connect a KVM cable to the out port on the Compaq Server Console Switch.
7. Connect the other end of that same KVM cable to the appropriate port on the server.
8. Repeat steps 3 through 7 for any other console switches to be added to this system.
9. Power on the console switches.
10. Power on the monitor.
11. Power up the server.

The following figure shows a Compaq Server Console Switch cascaded to an HP KVM Server Console Switch. The top console switch is the main console switch, while the bottom console switch is the cascaded console switch.



Example of a Compaq Server Console Switch cascade configuration



Item	Description
1	Server
2	KVM cable
3	PS/2 Interface Adapter
4	UTP CAT5 cable
5	Main Compaq Server Console Switch
6	Local port
7	Cascaded console switch

Cascading an HP KVM Server Console Switch with an HP IP Console Switch

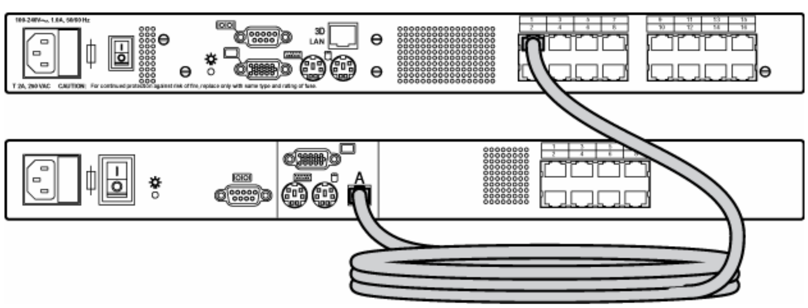
NOTE: To perform a firmware upgrade for a cascaded HP KVM Server Console Switch and all attached interface adapters, you must locally connect the keyboard, monitor, and mouse to the cascaded HP KVM Server Console Switch to access the local OSD.

1. Mount the console switches in the rack.

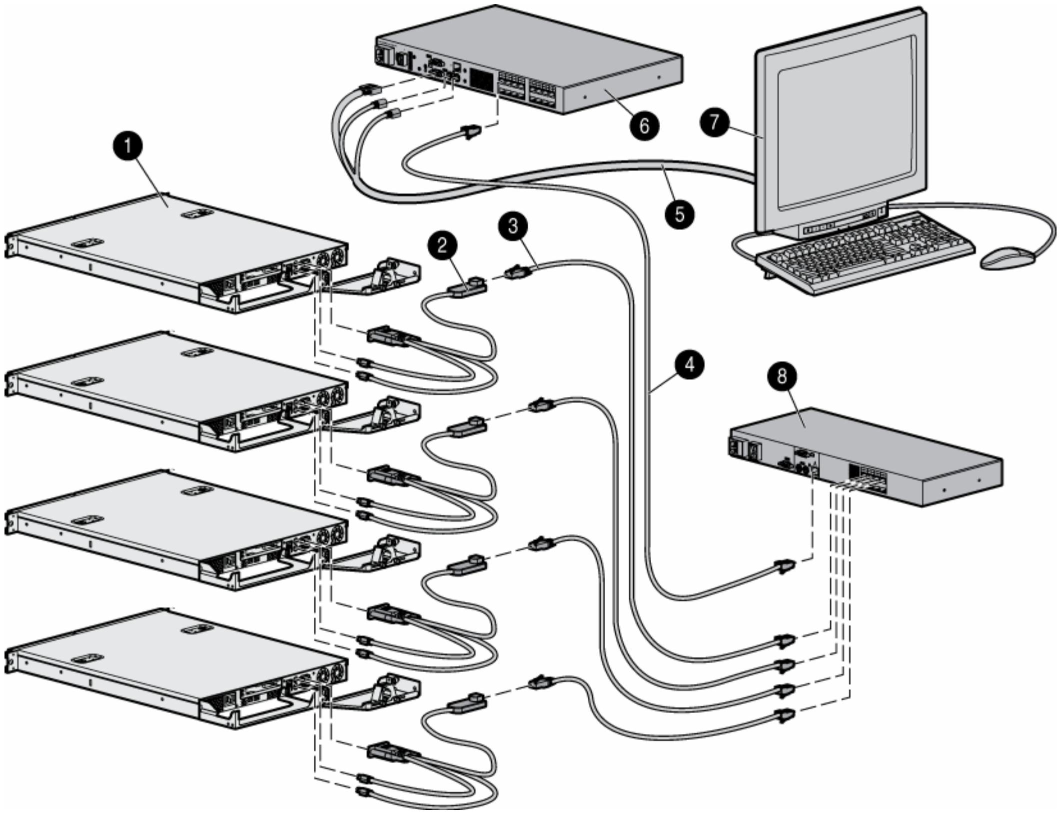
2. Locate a UTP CAT5 cable and connect one end to the server connection port ("Components" on page 71) on the cascaded HP KVM Server Console Switch.
3. Connect the other end of that same UTP CAT5 cable to the RJ-45 port on the interface adapter.
4. Connect the interface adapter to the appropriate ports on the server.
5. Repeat steps 1 through 3 for any other servers to be added to this system.
6. Connect the local port KVM cable to the cascaded HP KVM Server Console Switch.
7. Power on the cascaded HP KVM Server Console Switch.
8. Power on the monitor.
9. Power up the server.
10. Update the cascaded HP KVM Server Console Switch firmware.
11. Update all interface adapter firmware ("Updating the interface adapter firmware" on page 60).
12. Power off the cascaded HP KVM Server Console Switch.
13. Power off the monitor.
14. Disconnect the local KVM cables from the cascaded HP KVM Server Console Switch.
15. Connect the local port KVM cable to main HP IP Console Switch.
16. Connect a UTP CAT5 cable to the server connection port ("Components" on page 71) on the main HP IP Console Switch.
17. Connect the other end of that same UTP CAT5 cable to the RJ-45 interface port ("Components" on page 71) on the cascaded HP KVM Server Console Switch.
18. Repeat steps 15 and 16 for any other console switches to be added to this system.
19. Power on the console switches.
20. Power on the monitor.
21. Update the main HP IP Console Switch firmware (refer to the HP IP Console Switch documentation).
22. Update all interface adapter firmware ("Updating the interface adapter firmware" on page 60).

The following figure shows an HP IP Console Switch cascaded to an HP KVM Server Console Switch. The top console switch is the main console switch, while the bottom console switch is the cascaded console switch.

△ **CAUTION:** Do not use interface adapters to cascade HP IP Console Switches with HP KVM Server Console Switches. If interface adapters are used to cascade these products, undesirable operations might occur.



Example of an HP IP Console Switch cascade configuration



Item	Description
1	Server
2	PS/2 Interface Adapter or USB Interface Adapter*
3	UTP CAT5 cable
4	UTP CAT5 cable
5	KVM cable
6	Main HP IP Console Switch
7	Local port
8	Cascaded HP KVM Server Console Switch

* not shown

Viewing and selecting ports and servers

In this section

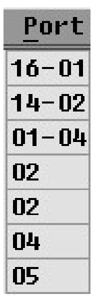
Viewing servers

You can view servers by name, port, or by the unique EID embedded in each interface adapter.

Viewing the Port column

When the Main dialog box is first launched, an OSD-generated port list is displayed by default.

The Port column indicates the port to which a server is connected. For example, in the following screen shot, the first number represents the port number of the first console switch and the second number represents the port number of the cascaded console switch port to which the server is connected.

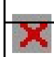
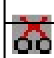
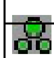
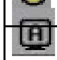


Port number of the first console switch	Port number of the cascaded console switch	Server Status Icon displayed ("Viewing the Server Status column" on page 70)	Description
16	01		The server is connected to port 01 of the 1 x 8 HP KVM Server Console Switch, and that HP KVM Server Console Switch is cascaded from port 16 of the first HP KVM Server Console Switch.
14	02		The server is connected to port 02 of the 2 x 16 HP KVM Server Console Switch, and that HP KVM Server Console Switch is cascaded from port 14 of the first HP KVM Server Console Switch.
01	04		The server is connected to port 04 of the Compaq Server Console Switch, and that Compaq Server Console Switch is cascaded from port 01 of the first HP KVM Server Console Switch.

Port number of the first console switch	Port number of the cascaded console switch	Server Status Icon displayed ("Viewing the Server Status column" on page 70)	Description
02			The servers are connected to an expansion module so they are using the same port. You can tell that the expansion modules are not cascaded because they do not have the second port numbers.
02			The servers are connected to an expansion module so they are using the same port. You can tell that the expansion modules are not cascaded because they do not have the second port numbers.
04			The server is connected to the first console switch and the interface adapter is not connected or the server is powered off.
05			The server is connected to the first console switch and is active.

Viewing the Server Status column

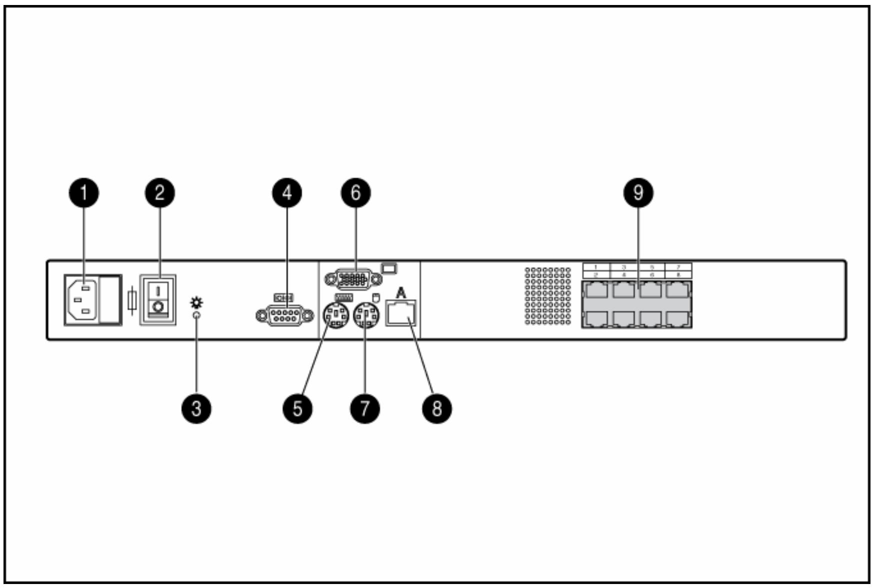
The status of the servers in the HP KVM Server Console Switch system are indicated by the icons in the right column of the Main dialog box.

Item	Description
	The interface adapter is connected directly, cascaded through an HP KVM Server Console Switch or an expansion module, or powered on.
	The interface adapter is not connected or the server is powered off.
	The interface adapter is cascaded to a Compaq Server Console Switch and the server is not connected or is powered off.
	The interface adapter is cascaded to a Compaq Server Console Switch and the server is connected or is powered on.
	The interface adapter is being upgraded.
	A symbol that identifies which port the console switch is connected to.
	A symbol that identifies which port you are actively connected to and viewing.
	A symbol that identifies to which port you are connected but which port you are not active.

Component identification

In this section

Components

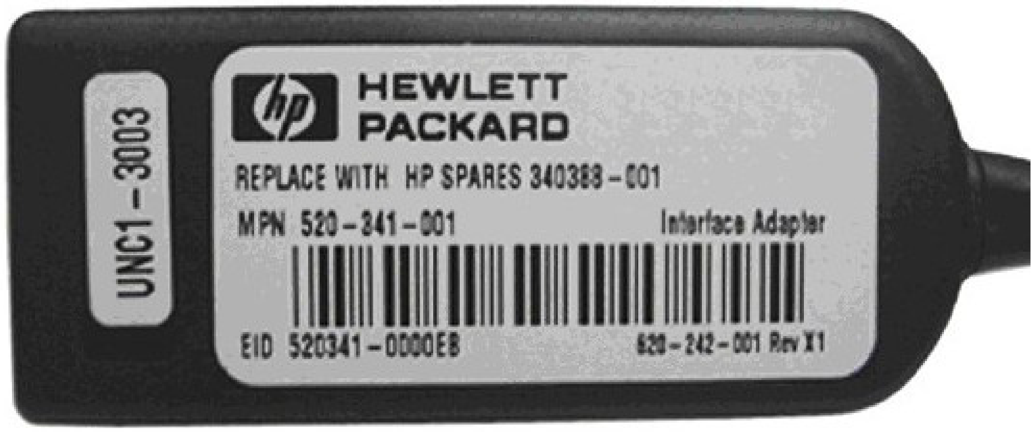


Item	Description
1	Power connector
2	Power switch
3	Activity indicator light
4	Serial download connector
5	Keyboard connector
6	Monitor connector
7	Mouse connector
8	RJ-45 Interface port (designated by the letter A)
9	Server connection ports

EID Location for the interface adapter

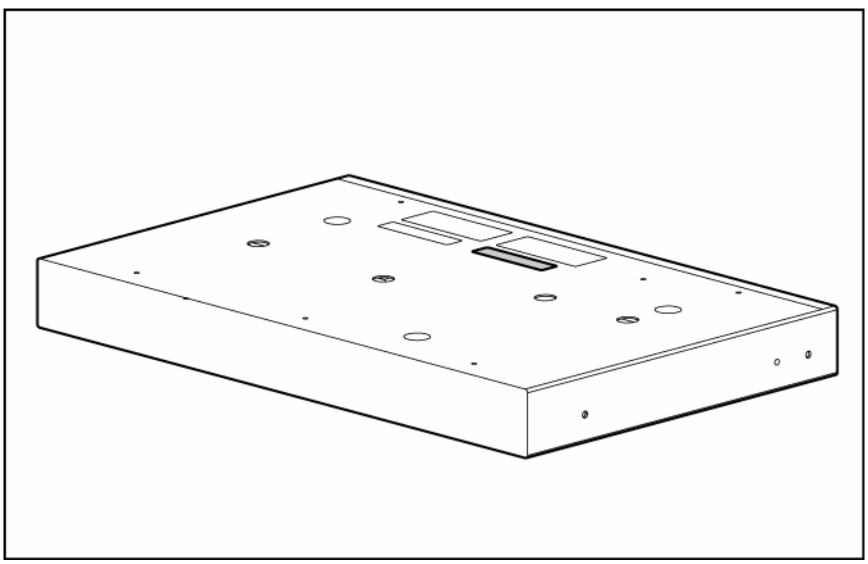
The EID for the interface adapter is a communication protocol between modular components of the console switch system. The EID enables central management components, such as the console switch, to

recognize and manage attached peripherals, such as the interface adapter, and assigns paths for data transmission. The EID is located on the back of the interface adapter.



Serial number location

You must provide the serial number to HP when requesting information or ordering spare parts. The serial number for the console switch is located on the bottom of the unit.



Specifications

In this section

Console switch spares specifications

Spare kit description	Unit weight	Dimensions
340386-001 SPS—SWITCHBOX, 1U, RCKMNT, 1 x 8	(without rails) 2.04 kg (4.5 lb) (packaged weight) 5.85 kg (12.9 lb)	(packaged size) 49.53 x 29.85 x 19.69 cm (19.5 x 11.75 x 7.75 in)
340387-001 SPS—SWITCHBOX, 1U, RCKMNT, 2 x 16	(without rails) 2.04 kg (4.5 lb) (packaged weight) 5.85 kg (12.9 lb)	(packaged size) 49.53 x 29.85 x 19.69 cm (19.5 x 11.75 x 7.75 in)
286597-001 SPS—ADPTR, INTFC, KYBD/VID/MSE, PS/2	0.34 kg (.75 lb)	24.77 x 21.59 x 6.35 cm (9.75 x 8.50 x 2.50 in)
340388-001 SPS—ADPTR, INTFC, KYBD/VID/MSE, USB	(packaged weight) 1.00 kg (2.2 lb)	(packaged size) 25.10 x 21.59 x 6.35 cm (9.88 x 8.5 x 2.50 in)
286600-001 SPS—BD, EXPN MOD, KYBD/IVD, MSE	0.45 kg (1.00 lb)	32.39 x 26.67 x 6.35 cm (12.75 x 10.50 x 2.50 in)
286592-001 SPS—CBL, KYBD/VID/MSE, CT5, 3FT	0.27 kg (.60 lb)	24.77 x 21.59 x 6.25 cm (9.75 x 8.5 x 2.5 in)
286593-001 SPS—CBL, KYBD/VID/MSE, CT5, 6FT	0.64 kg (1.40 lb)	24.77 x 21.59 x 6.25 cm (9.75 x 8.5 x 2.5 in)
286594-001 SPS—CBL, KYBD/VID/MSE, CT5, 12FT	1.13 kg (2.5 lb)	27.30 x 20.96 x 10.16 cm (10.75 x 8.25 x 4.00 in)
286595-001 SPS—CBL, KYBD/VID/MSE, CT5, 20FT	1.04 kg (2.30 lb)	27.30 x 20.96 x 10.16 cm (10.75 x 8.25 x 4.00 in)
286596-001 SPS—CBL, KYBD/VID/MSE, CT5, 40FT	0.50 kg (1.10 lb)	24.77 x 21.59 x 6.35 cm (9.75 x 8.5 x 2.50 in)

Connection length table

The console switch offers optimum video performance when the distance between the server and console switch is 15.24 m (50 ft) or less (1280 x 1024 at 75 Hz). The system is capable of operation at distances up to 30.48 m (100 ft) at reduced video resolutions (800 x 640 at 60 Hz, worst case).

	1280 x 1024	**1024 x 768**	**800 x 640**
15.24 m (50 ft)	X	X	X
22.86 m (75 ft)	—	—	X
30.48 m (100 ft)	—	—	X

Technical support

In this section

Before you contact HP

Be sure to have the following information available before you call HP:

- Technical support registration number (if applicable)
- Product serial number
- Product model name and number
- Applicable error messages
- Add-on boards or hardware
- Third-party hardware or software
- Operating system type and revision level

HP contact information

For the name of the nearest HP authorized reseller:

- In the United States, see the HP US service locator webpage (http://www.hp.com/service_locator).
- In other locations, see the Contact HP worldwide (in English) webpage (http://welcome.hp.com/country/us/en/wwcontact.html).

For HP technical support:

- In the United States, for contact options see the Contact HP United States webpage (http://welcome.hp.com/country/us/en/contact_us.html). To contact HP by phone:
  - Call 1-800-HP-INVENT (1-800-474-6836). This service is available 24 hours a day, 7 days a week. For continuous quality improvement, calls may be recorded or monitored.
  - If you have purchased a Care Pack (service upgrade), call 1-800-633-3600. For more information about Care Packs, refer to the HP website (http://www.hp.com).
- In other locations, see the Contact HP worldwide (in English) webpage (http://welcome.hp.com/country/us/en/wwcontact.html).

Acronyms and abbreviations

CRC

cyclic redundant checks

EID

electronic identification number

EPR

engineer problem resolution

IA

interface adapter

KVM

keyboard, video, and mouse

OSD

on-screen display

RAM

random access memory

RMA

return material authorization

USB

universal serial bus

UTP

unshielded twisted pair

VDC

voltage direct-current

VGA

video graphics array

Index

L

M

O

P

R

S

T

U

V